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THE INFLUENCE OF SOCIAL AND WORK EXCHANGE RELATIONSHIPS ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR

Pablo Cardona*
Barbara S. Lawrence**
Peter M. Bentler***

* Professor of Managing People in Organizations, IESE

** Professor, The Anderson Graduate School of Management

*** Professor of Psychology and Statistics, University of California, Los Angeles

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Abstract

Previous studies explain situational antecedents of OCB using social exchange theory. However, the effects of factors such as perceptions of job characteristics on OCB seem to require a different explanatory mechanism. We propose that these effects can be explained through a new exchange relationship that we call *work exchange*. We develop a theory for the situational antecedents of OCB that includes economic, work, and social exchange relationships. The theory is tested using structural equations.

Keywords: Exchange Relationships, Organizational Citizenship Behavior, Organizational Commitment, Perceived Organizational Support, Job Characteristics

THE INFLUENCE OF SOCIAL AND WORK EXCHANGE RELATIONSHIPS ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR (1)

Bateman and Organ (1983) proposed the concept of organizational citizenship behavior (OCB) to denote those organizationally beneficial behaviors and gestures that are neither enforced on the basis of formal role obligations nor elicited by contractual compensation. Although interest in and studies of OCB have grown dramatically during the last few years, research about antecedents of OCB is still in its early stages (Podsakoff, MacKenzie, Paine, and Bachrach, 2000). Organ (1990) proposes that exchange relationships play an important role as OCB antecedents. Perceptions of organizational experiences force people to evaluate their relationship with the organization as a social or economic exchange (Blau, 1964; Homans, 1974) and assess the extent to which the exchange is fair. People who perceive the relationship as a fair social exchange tend to increase their attachment to the organization and this increased attachment encourages OCB. People who perceive the relationship as an unfair social exchange tend to decrease their attachment to the organization, to redefine the relationship as an economic exchange, and to limit further activities accordingly.

While studies support Organ's proposition that positive social exchange relationships facilitate OCB (Farh, Podsakoff, & Organ, 1990; Moorman, 1991; Moorman, Blakely, & Niehoff, 1998; Settoon, Bennett, & Liden, 1996; Shore & Wayne, 1993; Smith, Organ, & Near, 1983), several unexplained results have emerged. For instance, certain types of attachments, such as organizational commitment, predict OCB in some studies (Shore & Wayne, 1993) but not in others (Settoon et al., 1996). In addition, various perceived organizational experiences that exert a positive influence on OCB do not appear to be social exchange relationships. For example, while individuals' perceptions of work scope and job characteristics appear to facilitate OCB (Farh et al., 1990; Van Dyne, Graham, & Dienesch, 1994), these perceptions seem more related to the attributes of individuals' jobs than to social exchanges. Fahr et al. note, for example, that it is "ironic that measures of intrinsic task characteristics demonstrated such robust explanatory power with respect to OCB." A recent review of the OCB literature states that: "Task variables also appear to be consistently related to a wide variety of organizational citizenship behaviors, although little attention has been given to them in the OCB literature. This is interesting because it suggests a whole new category of antecedents that has not been previously considered" (Podsakoff et al., 2000, p. 532).

This paper helps explain these inconsistent results by elaborating on current OCB theory. Similar to existing explanations, we propose that positive perceptions of economic exchange do not facilitate OCB while positive perceptions of social exchange do. However, we introduce a third exchange relationship, work exchange, which facilitates OCB both in addition to and independent of social exchange. Work exchange relationships, those that

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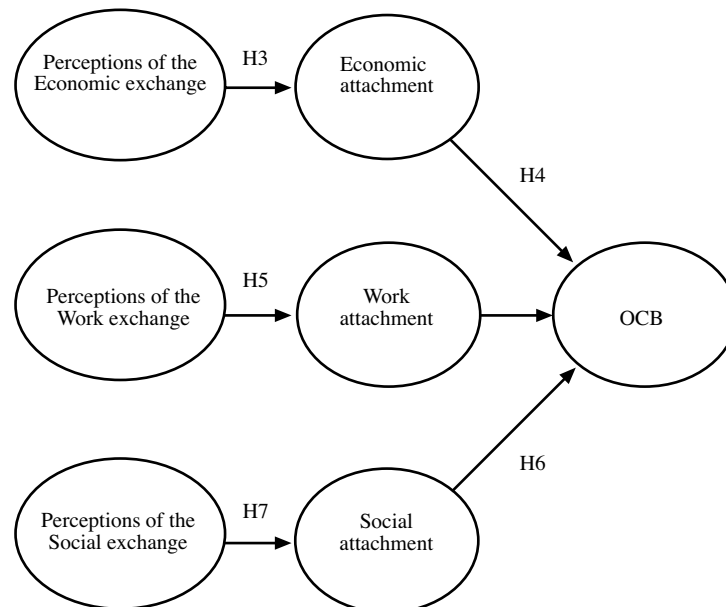
involve the implicit assumptions surrounding work-related tasks, help explain why perceptions of work characteristics such as work variety, autonomy, and identity predict OCB, but do not seem to belong as predictors in a social exchange model.

We also propose, in contrast to Organ's suggestion that people hold either social or economic exchange relationships, that people hold all three exchange relationships simultaneously. For example, individuals can hold positive perceptions of both economic and social exchange relationships with the organization. Finally, we propose that the impact of exchange relationships on OCB is mediated by individuals' exchange-related attachments to their organization. Thus, individuals' positive perceptions of social and work exchanges increase their social- and work-related attachments to the organization and it is these attachments, rather than the perceptions, that influence OCB. This differs from previous research because many studies neither include both perceptions and attachments as OCB antecedents (see Table 1) nor explain why specific perceptions and attachments work in some models but not in others. Figure 1 shows the proposed theoretical model.

Table 1. Comparison of Models of OCB Antecedent

Model *	Exchange	Perceptions	Attachments
Smith, Organ, and Near (1983) R ² = 0.16 / 0.12	Economic		
	Work		Job satisfaction
	Social	Leader support	
Organ and Konovski (1989) R ² = 0.05 / 0.05	Economic		
	Work	Job cognitions	
	Social		Positive and negative affect
Farh, Podsakoff, and Organ (1990) R ² = 0.15 / 0.08	Economic		
	Work	Task scope	
	Social	Leader fairness	
Shore and Wyne (1993) R ² = 0.12 / 0.08	Economic		Continuance OC
	Work		
	Social	Perceived organizational support	Affective OC
Van Dyne, Graham, and Dienesch (1994)	Economic		
	Work	Job characteristics	
	Social	Workplace values	Covenantal relationship
Settoon, Bennett, and Liden (1996)	Economic		
	Work		
	Social	Perceived organizational support	Leader-member exchange
Moorman, Blakely, and Niehoff (1998)	Economic		
	Work		
	Social	Perceived organizational support	

Figure 1



A framework for situational antecedents of Organizational Citizenship Behavior.

Theory and Hypotheses

Organ proposes that, while individual disposition is an important antecedent of OCB, perceptions of organizational experiences play a significant role because they "... force a conscious appraisal of the type of exchange –social or economic– that defines the relationship with the organization (1990, p. 66)." More specifically, Organ suggests that individuals are more likely to engage in OCB when they perceive their relationship with the organization as a fair social exchange than when they perceive it as a fair economic exchange. Organ's rationale is that perceived fairness involves different requirements in each of the exchange relationships: "Whereas economic exchange demands a specific quid for a particular quo, fairness in social exchange requires only a sense that the relationship is based on 'good faith' recognition of each other's contributions" (Organ, 1990, p. 63). Research has measured positive perceptions of social exchange relationships using constructs such as perceived organizational support (Moorman et al., 1998; Settoon et al., 1996; Shore & Wayne, 1993) and workplace values (Van Dyne et al., 1994).

Exchange relationships differ from related concepts in two ways. First, unlike interpersonal relationships, they acquire shared meaning and organizational implications that transcend the relationships between two individuals. For example, in an economic exchange, an employee may sign the contract after discussing it with a manager, but the contract itself specifies the individual's obligations to the organization, not to the manager. Second, exchange relationships are not necessarily viewed as contractual obligations. Thus, they differ from psychological contracts, which involve an "individual's belief in and interpretation of a promissory contract" (Rousseau & McLean Parks, 1993, p. 19). As Rousseau (1989, p. 127) notes, "The experience of inequity is distinct from that of contract violation. ... Inequity can be remedied; contract violation, which causes mistrust, cannot be so easily repaired." Psychological contracts thus represent a subset of perceptions of exchange

relationships. All psychological contracts involve perceptions of exchange relationships, but not all perceptions of exchange relationships are psychological contracts.

Three Distinct Exchange Relationships

Theory on exchange relationships traditionally includes two types of exchanges: economic and social (Blau, 1964). Organ summarizes their differences: “Economic exchange has a contractual character; the respective parties (e.g., the individual participant and the organization) agree in terms of a specific quid pro quo, over an articulated domain of behavior and a precise time span; the respective obligations are finite and do not depend on trust, since the terms are enforceable by third parties. Social exchange, by contrast, involves diffuse, ill-defined expectations in terms of the nature, value, and timing of the benefits rendered and received by the parties” (Organ, 1990, p. 63).

These definitions suggest two criteria that categorize individuals’ organizational experiences as exchanges: 1) the extent to which individuals’ agreements with the organization are explicit or formally-defined, and thus enforceable by third parties, and 2) the extent to which the agreements’ mutual expectations are specific, and thus characterized by an articulated domain of behavior and a precise time span. According to Organ, in an economic exchange, the individual and the organization hold an *explicit* agreement defining reciprocal obligations that are *specific* in nature. Because these mutual obligations are explicit, they do not change unless the parties formally renegotiate the relationship. In contrast, in a social exchange, the individual and the organization hold an *implicit* agreement defining reciprocal expectations that are not specific in nature. Because these mutual expectations are implicit, they change as the relationship matures and as the socially-shared beliefs, or social norms, defining the relationship evolve.

Neither economic nor social exchanges, however, account for the implicit expectations that evolve around work-related activity. While economic exchange relationships involve explicit agreements, it is impossible to specify all the expected behaviors. As a result, many expected behaviors get defined by employees’ shared beliefs about appropriate work. For example, social norms may define a “good” employee as one who stays after 5:00 p.m. or who plays golf on weekends. These behaviors are not included in the employee’s economic exchange relationship, but they are significant activities that define the value of his or her work. Thus, as shown in Table 2, we suggest that in addition to social and economic exchanges, people also engage in work exchanges.

Table 2. Types of Exchange Relationships

Terms of the Agreement: Is agreement explicitly-defined and enforceable?		
=====		
Content of the Agreement: Are mutual obligations specific and well-articulated?	Explicit	Implicit
Specific	Economic Exchange	Work Exchange
Non-Specific	**	Social Exchange

** This is a null-category because individuals cannot make explicit agreements with non-specific content.

In a work exchange relationship, the individual and the organization hold an *implicit* agreement defining reciprocal expectations of specific work-related behaviors, such as hours worked or tasks performed. Similar to a social exchange, the mutual expectations defining a work exchange evolve as the relationship matures and social norms change. Thus, work exchange differs from economic exchange because it is an implicit agreement that evolves over time. But it also differs from social exchange because the obligations are specific to work activities rather than diffuse or ill-defined social interactions.

For example, organizations and individuals sign contractual agreements that specify job requirements, but both parties implicitly include additional expectations. The social norms of an investment bank may define a good employees' work week as 80 hours, but this is rarely dictated in the employment contract. Employees who work 70 instead of 80 hours a week are not breaking a contractual obligation. Similarly, a computer engineer may expect to work on a company's challenging, state-of-the-art projects, but this may not be a contractual obligation. If the engineer receives only medium-tech projects for the first five years, he or she may be discouraged, but his or her employment contract has not been broken. Because these work-related expectations are neither enforced on the basis of contractual obligations nor explicitly rewarded, individuals may choose to exceed their contributions, thus introducing the possibility of OCB. As a result, people distinguish between and are involved in three different types of exchange relationships with the organization. Thus, we propose that:

H1: Individuals perceive their economic, social, and work exchange relationships with the organization as distinct.

Zero-Sum Versus Spillover Effects

Organ proposes that individuals experience either a social or an economic exchange relationship with their organization at a given moment. People tend to presume a social exchange relationship in the beginning, and this presumption continues until organizational experiences lead them to doubt that the relationship is fair. They then redefine the relationship as an economic exchange. Thus, in Organ's theory, economic and social exchange relationships should be uncorrelated. However, to the best of our knowledge, this lack of association has not yet been tested.

In contrast, we propose that individuals experience at least one, but maybe two, and perhaps all three exchange relationships simultaneously. Thus, the presence of positive perceptions of one exchange type does not preclude positive perceptions of the other two. Moreover, we suggest that spillover effects produce a positive association among exchange relationships. For example, while individuals' positive perceptions of economic rewards primarily affect their economic exchange relationship with the organization, these perceptions also influence social and economic exchanges. Individuals are likely to interpret these positive perceptions as an implicit signal that the organization values their job. As a result, the job's perceived importance increases with individuals' increasing positive perceptions of their economic exchange relationship, even though no explicit or contractual adjustments have been made to the job's definition. As a result, when individuals hold positive perceptions of their economic exchange relationship with the organization, positive spillover effects to their work exchange relationship seem likely. Likewise, an individual's positive perceptions of his or her social exchange relationship may spillover to positive perceptions of the economic exchange relationship. When individuals perceive that the organization values them through the support, encouragement, and help they receive, they

develop positive perceptions of the social exchange relationship. As positive perceptions of this relationship increase, the comparative value that individuals place on internal social rewards against external economic rewards increases. As a result, they are more likely to accept somewhat lower economic rewards as being fair than they would otherwise. For example, engineers at Hewlett-Packard have long accepted salaries at the low-end of the market in return for the social exchange relationship they receive for working at HP.

This type of positive association has been indirectly tested at the individual-to-individual level, between employees and their leaders. Farh et al. (1990) examine the economic, work, and social dimensions of the individual-to-leader exchange relationship. They find that the three types of leader fairness perceptions were strongly and positively correlated (equal or above .60). We suggest that the same type of spillover effects occur at the individual-to-organization level. Thus,

H2: Positive perceptions of the economic, social, and work exchange relationships will be positively correlated.

Attachments as OCB Mediators

Scholars studying organizational commitment agree that individuals' positive perceptions of exchange relationships are important OCB antecedents. However, they emphasize that individuals' attachments to the organization, such as their organizational commitment (Mathieu & Zajac, 1990), mediate this association (Meyer & Allen, 1997). For example, Meyer, Allen, and Smith (1993) studied the relationship between different types of organizational commitment and OCB. They found a significant relationship between OCB and attachments such as affective and normative organizational commitment, and a non-significant relationship between OCB and the attachment represented by continuance organizational commitment. Thus, individuals can bond to the organization through more than one type of attachment (Mowday, Porter, & Steers, 1982) and these different attachments exert specific effects on OCB (Meyer & Allen, 1997).

While relationships between perceptions and attachments may be reciprocal (Fiske & Taylor, 1991, p. 550; Mackie & Hamilton, 1993), previous OCB studies suggest that the primary direction of causality proceeds from perceptions to attachments to behavior (Van Dyne et al., 1994). Thus, it is expected that individuals' positive perceptions of exchange relationships generate attachments that in turn influence OCB.

Economic Exchange Relationship

Individuals evaluate their economic exchange relationship with the organization primarily through their perceptions of the economic rewards they receive, such as salary, status, and seniority perks. When individuals perceive these economic rewards as positive compared to their job demands and opportunities in other organizations, they view their economic exchange with the organization as valuable. Positive perceptions of the economic exchange relationship increase individuals' economic attachment to the organization. For example, college graduates are likely to feel attached to an organization that pays what they perceive as a good salary compared to what other companies offer.

Positive perceptions of the economic exchange relationship depend not only on the organizational reward system, but also on the availability of comparable job alternatives

outside the organization and the personal cost involved in changing jobs (Allen & Meyer, 1990). For instance, older employees frequently remain with companies because their salaries are not easily replicable elsewhere and the cost of moving established families is high. This type of economically-based attachment is sometimes characterized as continuance commitment (Allen & Meyer, 1990). Thus, when individuals perceive the economic rewards they receive from the organization as positive given the possible choices, they are more economically attached to the organization. Therefore, we propose that

H3: Individuals' positive perceptions of economic rewards strengthen their economic attachment to the organization.

By definition, OCBs are not formally rewarded by organizations. As a result, attachments produced by positive perceptions of economic rewards should not increase an individual's propensity to engage in OCB. Consistent with this, Meyer et al. (1993) find no relationship between continuance commitment and OCB. Shore and Wayne (1993) find a negative relationship between continuance commitment and OCB. They conclude that "employees who feel bound to their employing organization because of an accumulation of side bets are less inclined to engage in extra-role behaviors that support organizational goals" (Shore & Wayne, 1993, p. 779). Therefore, we propose that:

H4: The strength of individuals' economic attachments to the organization will not increase their propensity to engage in Organizational Citizenship Behavior.

Work Exchange Relationship

Individuals evaluate their work exchange relationship with the organization primarily through their perceptions of their job's characteristics. When individuals perceive their jobs as professionally rewarding –for instance, when they feel that their job helps them learn, satisfies their curiosity, is appreciated by the organization, or develops them intellectually and emotionally– they view their work exchange with the organization as more valuable. Positive perceptions of the work exchange relationship increase individuals' work attachment to the organization. For example, an engineer is likely to be attached to an organization that provides him or her the opportunity to work on state-of-the-art projects. Research on employee involvement finds that positive job perceptions increase people's sense of responsibility to, and strengthen their emotional bonds with, their organization (Hackman & Oldham, 1976; Lawler, 1992). This suggests that individuals' perceptions of job characteristics influence their work attachment to the organization (Salancik, 1977; Van Dyne et al., 1994). Therefore, we propose that:

H5: Individuals' positive perceptions of job characteristics strengthen their work attachment to the organization.

Pearce and Gregersen (1991) find that work attachments, such as the heightened sense of responsibility that results from positively-perceived job characteristics, generate OCB. Farh et al. (1990) find that positive perceptions of job characteristics have a direct positive effect on OCB; however, their study does not include attachments. Van Dyne et al. (1994) show that when attachments are included, they mediate the relationship between perceived job characteristics and OCB. Thus, we suggest that attachments produced by job characteristics are likely to increase an individual's propensity to engage in OCB. Therefore, we propose that:

H6: The stronger the individuals' work attachments to the organization, the greater their propensity to engage in Organizational Citizenship Behavior.

Social Exchange Relationship

Individuals evaluate their social exchange relationship with the organization primarily through their perceptions of how the organization supports its employees. When individuals perceive their organization as caring about its employees and as equitable and sensitive to employee needs, they view their social exchange with the organization as more valuable. Positive perceptions of the social exchange relationship increase individuals' social attachment to the organization. For example, an employee is likely to be attached to an organization that tries to help when he or she has a personal problem. These perceptions of organizational support increase the individual's identification with the organization (Kramer, 1991) and generate feelings of moral obligation to reciprocate with behaviors that benefit the organization (Schwartz, 1977). Perceptions of organizational support increase individuals' attachment to their organization (Allen & Meyer, 1990), to a specific part of the organization, or to specific associates or superiors (Organ, 1990). For example, Settoon et al. (1996) find that individuals' perceptions about organizational support to employees increase the attachment between those individuals and their supervisors. Individuals' perceptions of organizational support also exert a positive influence on the quality of the individual's relationship with and commitment to the organization (Konovsky & Pugh, 1994; Shore & Tetrick, 1991; Steers, 1977). Therefore, we propose that:

H7: Individuals' positive perceptions of organizational support strengthen their social attachment to the organization.

Organ (1990) suggests that attachments that result from the social exchange relationship between the individual and the organization or a portion of the organization are likely to produce OCB. Settoon et al.'s (1996) study provides support for this theory, finding that social attachments such as leader-member exchange exert a direct and positive effect on OCB. Therefore, we propose that:

H8: The stronger the individuals' social attachments to the organization, the greater their propensity to engage in Organizational Citizenship Behavior.

Method

Samples and Procedure

With the collaboration of the Spanish Ministry of Health and Consumer Affairs, we conducted three studies with Spanish physicians: Pre-test study (N=189), Study 1 (N=220), and Study 2 (N= 1084). Each study was conducted as part of a larger research project administered by the Ministry on the motivation of physicians in Spain. The questionnaire used in this paper was embedded in a larger questionnaire by the Ministry, and the responses were anonymous. The first version of the questionnaire was pre-tested with a sample of 189 physicians from eight hospitals in Madrid. Out of the twenty-four items of the questionnaire, only three items (one item in three different scales) were modified in the final version. Results for each scale in the pre-test are provided in the description that follows.

Study 1. The questionnaire was administered to a convenience sample of 220 physicians working in eight hospitals in Madrid, Spain. These hospitals have stronger research programs than average hospitals because most of them have ties with different universities. Although the sample is not random, the respondents were chosen by the Ministry so that the age, gender, tenure, and professional roles of the sample are representative of physicians in Spain: the average age of respondents is 40, and 30% of them are female; and the distribution of typical roles such as department head and attendant approximates that of a medium or large Spanish hospital. The sample includes physicians from departments such as internal medicine, pediatrics, and surgery. All questionnaires were handed in and collected by the representative of the Ministry in each hospital. The sample used for the analysis includes 211 out of the 220 questionnaires (96%): four cases were deleted due to missing data and five cases were deleted after being identified as outliers because of their contribution to the sample's multivariate kurtosis.

Study 2. A total of 3272 questionnaires were sent to a random sample of physicians working in hospitals in Madrid and Barcelona, Spain. We obtained a total of 1185 responses (response rate of 36%). The average age of respondents is 44 (higher than in Study 1: $p < .05$) and 36.5% of them are female (the difference to the proportion of females in Study 1 is not significant at the 0.05 level). The sample includes physicians from departments such as internal medicine, pediatrics, and surgery. The sample was considered representative of the population by the Spanish Ministry of Health in terms of demographic variables and departments represented in the sample. One hundred and one questionnaires were excluded from the analysis due to missing data. Thus, the sample used for the analysis includes 1084 questionnaires.

Measures

The questionnaire was written in English and then translated into Spanish using a back-translation method (Brislin, 1986). During the translation process, the wording of some items was slightly adapted to achieve a meaning in Spanish that is closer to the original meaning in English. Participants responded to questions using a five-point Likert scale ranging from absolutely disagree to absolutely agree. High scores reflect a high level on the corresponding variable except for a few items that are reverse scored in order to reduce systematic error in the responses.

As this study was only one section of the questionnaire distributed to the physicians, the Ministry limited the number of questions we could ask. Thus, it was necessary to choose, among the items currently used, only three or four items for each scale. This reduced item set seemed an acceptable tradeoff for the opportunity to study OCB antecedents in a large professional population in a non-US country. We chose those items that seemed to cover the different theoretical dimensions of each construct. The Appendix shows the final questionnaire items and the scale Cronbach alphas for Study 1 (α_1) and Study 2 (α_2).

Independent Variables

Relying primarily on antecedents currently used in OCB research, we selected one variable to represent each component of the framework. The selection criteria were twofold: previous use in OCB research and content validity. Where we could not find an existing variable for one component, we developed a new variable. We do not suggest that these are the only appropriate variables nor do we suggest that all perceptions and attachments provide equally good predictors of OCB. For example, several studies suggest that volatile attachments

such as mood and satisfaction show no significant relationship with OCB when other variables are taken into account (Farh et al., 1990; Organ, 1990). However, if the framework works as hypothesized, the selected variables should provide an adequate initial test.

Positive perceptions of the economic exchange relationship are represented by Perceived Economic Rewards. This variable is defined as an individual's perception of how positive the organization's economic rewards are for him or her compared to other alternatives. It is measured with four items ($\alpha_1 = 0.76$; $\alpha_2 = 0.76$) designed for this study because no previously defined OCB antecedents were found that belong to this category. The scale was assessed in the pre-test study ($\alpha_0 = 0.73$).

Economic attachments are represented by Choice Organizational Commitment. This variable is defined as an individual's attachment to the organization that does not depend on the high costs of leaving or the lack of alternatives. This variable is the reverse score of Continuance Organizational Commitment (Meyer et al., 1993), which has been used in previous research as a possible OCB antecedent (Shore & Wayne, 1993). However, Continuance Organizational Commitment represents the economic attachment that results when employees feel they do not have opportunities to change jobs, and thus, it is a negative attachment. As we wanted a construct for a positive attachment, we used the reversed score of a Continuance Organizational Commitment scale measured with three items ($\alpha_1 = 0.71$; $\alpha_2 = 0.62$) adapted from Meyer et al. (1993). Given that Choice Organizational Commitment only represents economic freedom to change organizations, other economic attachment variables could produce different relationships in the model.

Positive perceptions of the work exchange relationship are represented by Perceived Job Characteristics. This variable is defined as an individual's perception of a job's motivating potential for him or her. It is measured with three items ($\alpha_1 = 0.58$; $\alpha_2 = 0.52$) adapted from Hackman and Oldham's (1975) Job Diagnostic Survey. Perceived Job Characteristics was selected to represent this category because it reflects the job's motivating potential, and it has been used in several OCB studies (Farh et al., 1990; Van Dyne et al., 1994). While the reliabilities for this variable are lower than desirable, the main effect of low reliabilities is to attenuate relationships between this variable and others in the model. Thus, the results provide a conservative test of the role this variable plays in the framework (Schmitt, 1996). Another variable that could be used for this component of the framework is Intrinsically Satisfying Work (Podsakoff, MacKenzie, & Bommer, 1996).

Work attachments are represented by Growth Organizational Commitment. This variable is defined as an individual's attachment to the organization that results from his or her perceived opportunities for satisfying personal and professional growth needs. It is measured with three items ($\alpha_1 = 0.72$; $\alpha_2 = 0.81$) designed for this study. This variable was created because existing commitment concepts, such as affective organizational commitment, do not distinguish between work-based and socially-based attachments. Growth Organizational Commitment is based on "employee growth need" (Hackman & Oldham, 1975). Individuals perceive their work experiences and effort as a positive exchange with the organization because they see their work as an opportunity for personal and professional growth. These individuals will feel attached to organizations that provide such opportunities for growth. This scale was assessed in the pre-test study ($\alpha_0 = 0.82$).

Positive perceptions of the social exchange relationship are represented by Perceived Organizational Support. This variable is defined as an individual's perceptions of the extent to which the organization values his or her contributions and cares about his or her well-being

(Eisenberger, Huntington, Hutchison, & Sowa, 1986). It is measured with four items ($\alpha_1 = 0.90$; $\alpha_2 = 0.91$) adapted from the Survey of Perceived Organizational Support (Eisenberger et al., 1986). Perceived Organizational Support can generate social attachment to the organization because it increases the feelings of obligation toward the organization through reciprocity (Gouldner, 1960) and organizational identification (Kramer, 1993). Another variable that could be used for this component is Leader-Member Exchange (Setton et al., 1996), but this variable only examines social exchange between an employee and his or her leader.

Social attachments are represented by Normative Organizational Commitment. This variable is defined as an individual's attachment to the organization that results from a personal sense of duty and obligation toward the organization (Allen & Meyer, 1990). It is measured with three items ($\alpha_1 = 0.76$; $\alpha_2 = 0.75$) adapted from the normative organizational commitment scale of Meyer et al. (1993). Normative organizational commitment was selected to represent this concept because the sense of obligation toward the organization is an attachment based on normative expectations in a social exchange (Etzioni, 1961). A similar concept that could be used for this concept is Moral Organizational Commitment (Jaros, Jermier, Koheler, & Sincich, 1993).

Dependent Variable

Organizational Citizenship Behavior is measured with four self-report items ($\alpha_1 = 0.72$; $\alpha_2 = 0.67$) adapted from Smith et al. (1983). Van Dyne and Lepine (1998) have found that OCB is characterized differently by self, peers, and supervisors. They advise that different rating sources may be appropriate for different purposes. Specifically they suggest that "self-reports would be appropriate for studies involving self-conceptualization, self-image, self-representation, or self-development, but observer reports would be appropriate for research on behavior in organizational settings, where perceptions of others are critical determinants of feedback, promotions, transfers, and merit increases" (Van Dyne & Lepine, 1998, p. 118). A self-report measure of OCB is appropriate for this study because we are interested in the subjective development of OCB from subjective perceptions and attachments. In order to minimize potential desirability bias we edited the items so that it is more difficult to agree with each item (Sheatsley, 1983). For example, the item: "Makes innovative suggestions to improve department" (Smith et al., 1983) was changed to: "I frequently suggest new ideas to improve my department."

Even though this scale contains items from both the altruism and compliance factors of OCB (Smith et al., 1983), the exploratory factor analysis found only one factor when these items were analyzed together with the rest of the items. Since the emphasis of this study is the antecedents of OCB and the relationships among them rather than the OCB subscales, we treat all the OCB items as one factor.

Results

We test the model presented in this paper with structural equation analysis (Bentler & Weeks, 1980; Jöreskog, 1978) using EQS version 5 (Bentler & Wu, 1995). We calculate maximum likelihood (ML) estimates, and the Satorra-Bentler scaled chi-square (Satorra & Bentler, 1988) as a correction for nonnormally distributed data (Chou, Bentler, & Satorra, 1991; Hu, Bentler, & Kano, 1992).

Construct Validity

Exploratory factor analyses. Table 3 shows that the results of the exploratory factor analyses support the hypothesized factor structure. In both cases, the 24 questionnaire items load as expected on the seven latent constructs. All the items have loadings higher than 0.4 on the expected factors (underlined) and the cross-factor loadings are smaller than 0.3. This indicates that the items seem to perform differentially as had been designed. Table 4 shows the resulting descriptive statistics on these factors for both samples. The main differences between the two samples, in terms of means and variances, appear in the variables Growth Organizational Commitment, and Organizational Citizenship Behavior. For these variables, physicians in Study 1 show statistically significant higher averages and less variance than physicians in Study 2 (GOC: S1 mean = 3.77, sd = 0.83, S2 mean = 3.35, sd = 0.25, t-test, $p < 0.001$; OCB: S1 mean=4.19, sd = 0.68, S2 mean = 3.92, sd = 0.80, t-test, $p < 0.001$).

Table 3. Factor Loadings of Exploratory Factor Analyses (Orthosim Solution)

	POS1	OCB1	COC1	GOC1	PER1	PJC1	NOC1	POS2	OCB2	COC2	GOC2	PER2	PJC2	OC2
	0.76	0.02	0.00	0.12	0.17	0.10	0.15	0.73	0.05	0.02	0.20	0.16	0.11	0.14
	0.77	-0.02	0.07	0.10	0.22	0.10	0.16	0.76	0.03	0.04	0.18	0.21	0.10	0.20
	0.65	-0.06	0.13	0.23	0.18	0.21	0.15	0.71	0.13	0.04	0.20	0.17	0.19	0.15
	0.78	0.02	0.06	0.07	0.21	0.16	0.15	0.73	0.08	0.07	0.20	0.20	0.16	0.19
	-0.03	0.62	0.09	0.07	-0.06	0.15	0.16	0.08	0.61	-0.02	0.08	0.05	0.11	0.06
	0.07	0.62	0.14	0.14	0.10	-0.02	0.15	0.08	0.63	0.03	0.12	-0.10	0.12	0.09
	0.06	0.61	-0.02	0.07	0.01	0.08	0.24	-0.02	0.52	0.07	0.23	0.05	0.04	0.15
	-0.09	0.65	0.02	0.14	0.05	0.01	0.01	0.06	0.57	-0.07	0.11	-0.09	0.07	0.01
	0.02	0.02	0.69	-0.11	0.08	-0.01	-0.08	0.00	-0.02	0.64	0.01	0.02	0.00	-0.02
	0.04	0.08	0.64	0.05	0.04	0.19	0.17	0.04	0.01	0.60	0.10	-0.04	0.15	0.11
	0.09	0.09	0.70	0.03	0.08	0.07	-0.12	0.07	0.02	0.64	-0.01	0.06	-0.01	0.00
	0.03	0.08	-0.15	0.69	-0.05	-0.02	0.09	0.15	0.11	0.02	0.69	0.10	0.13	0.13
	0.17	0.08	0.08	0.62	0.11	0.17	0.21	0.25	0.12	0.02	0.64	0.15	0.17	0.27
	0.10	0.18	0.06	0.64	0.12	0.17	0.05	0.14	0.18	0.06	0.65	0.05	0.14	0.12
	0.18	0.15	0.09	0.00	0.67	0.12	0.09	0.17	-0.03	0.02	0.12	0.72	0.02	0.06
	0.13	-0.07	0.04	-0.03	0.61	-0.01	0.00	0.14	-0.07	0.01	-0.02	0.58	0.02	-0.01
	0.12	-0.10	0.05	0.02	0.62	0.22	0.02	0.15	0.01	0.04	0.05	0.61	0.06	0.06
	0.23	0.08	0.09	0.22	0.66	0.11	0.03	0.18	-0.03	0.01	0.19	0.65	0.07	0.13
	0.17	0.02	0.02	0.17	0.10	0.54	0.08	-0.01	0.16	0.05	-0.00	-0.02	0.60	0.09
	0.11	0.08	0.01	0.04	0.07	0.67	-0.02	0.22	0.03	-0.00	0.30	0.10	0.52	0.01
	0.03	0.03	0.21	0.10	0.15	0.54	0.15	0.23	-0.02	0.04	0.27	0.09	0.42	0.09
	0.21	0.13	-0.01	0.06	0.01	0.17	0.68	0.15	0.07	0.06	0.13	0.00	0.12	0.64
	0.01	0.15	-0.08	0.16	0.02	-0.00	0.68	0.15	0.05	-0.01	0.19	0.08	0.03	0.65
	0.19	0.13	0.00	0.12	0.09	0.02	0.68	0.15	0.12	0.04	0.16	0.10	0.07	0.67

Table 4. Descriptive Statistics

Measure	M ₁	M ₂	SD ₁	SD ₂	1	2	3	4	5	6	7
Economic Exchange											
1. Perceived extrinsic rewards	2.50	2.53	0.96	1.00	0.07	0.20	0.24	0.13	0.42	0.09	0.04
2. Choice organizational commitment	3.52	3.70	0.96	0.89	0.07	0.20	0.21	0.00	0.15	0.00	0.15
Work Exchange											
3. Perceived job characteristics	3.87	3.86	0.74	0.77	0.09	0.11	0.23	0.23	0.30	0.19	0.13
4. Growth organizational commitment	3.77	3.35	0.83	1.03	0.25	0.10	0.33	0.27	0.27	0.27	0.27
Social Exchange											
5. Perceived organizational support	2.51	2.53	1.01	1.12	0.44	0.10	0.31	0.47	0.30	0.32	0.05
6. Normative organizational commitment	2.78	2.63	1.05	1.07	0.20	0.12	0.21	0.40	0.40	0.31	0.31
7. Organizational citizenship behavior	4.19	3.92	0.68	0.80	-0.05	0.03	0.22	0.30	0.15	0.25	0.25

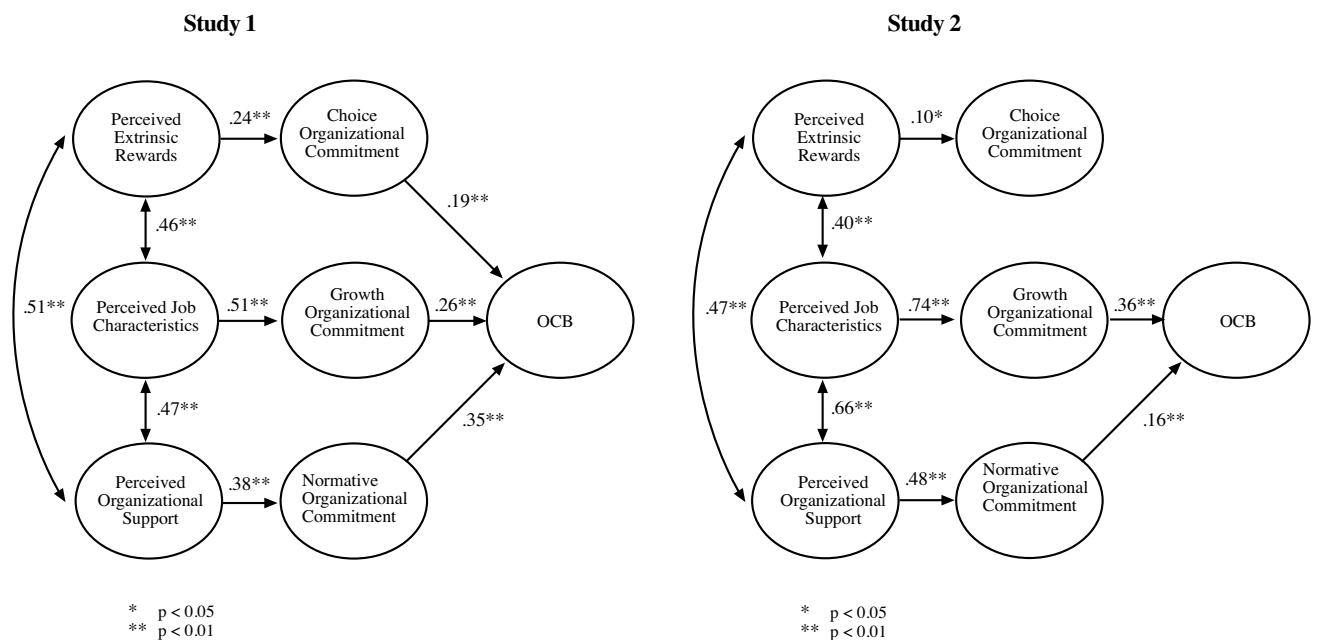
Note: Correlations among factors for Study 1 appear above the diagonal; correlations among factors for Study 2 appear below the diagonal. Correlations larger than 0.13 are significant at the 0.05 level, and larger than 0.18 are significant at the 0.01 level.

Confirmatory factor analyses. Both confirmatory factor analyses reveal that the items provide good measures of the hypothesized latent constructs. The Satorra-Bentler scaled chi-squares with 231 degrees of freedom are 314 for the Study 1 data and 558 for the Study 2 data, producing probability values lower than 0.001. However, all the other indicators show the model attains a good fit: the robust CFI for Study 1 and Study 2 are, respectively, 0.94 and 0.95; the models include no post-hoc adjustments; the parameter estimates converge cleanly in less than ten iterations; and no parameters need to be constrained to achieve convergence.

Structural Equation Models

Figure 2 shows the standardized results of the structural models for Study 1 and Study 2. The paths representing the hypotheses of the model and all the other possible cross-paths between factors, as well as the correlations among residuals, were evaluated by Lagrange Multiplier and Wald tests to assess which ones should be omitted from or added to the theoretical model. Correlations are represented by two-way arrows and regression coefficients are represented by one-way arrows. The only structural path that differs between the two models is the one between choice organizational commitment and OCB. This path is positive and significant in Study 1 and non-significant in Study 2. The Satorra-Bentler scaled chi-squares with 243 degrees of freedom are 334 for Study 1 and 693 for Study 2, producing probability values lower than 0.001. The Robust CFI is 0.94 with both samples.

Figure 2. Results from two studies on the Situational Antecedents of Organizational Citizenship Behavior



Results from two studies on situational antecedents of Organizational Citizenship Behavior.

Two-group analysis. As a final cross-validation test, we performed a stringent two-group analysis with the two samples. We constrained all the factor and structural parameters to be equal in both samples. Only four constraints out of 33 had to be released: one factor

loading from perceived job characteristics, the correlation between perceived organizational support and perceived job characteristics, and two structural paths: the path from perceived job characteristics to growth organizational commitment, and the path from continuance organizational commitment to OCB. The chi-square for the two-group model is 1155 based on 511 degrees of freedom, and the CFI is 0.94. The difference in the two structural paths probably indicates that the two samples are not completely comparable. However, given the severity of the test (Byrne, 1994), this analysis suggests the model is relatively stable across the two studies.

Test of the Hypotheses

The results of the structural models in both Study 1 (subscript 1) and Study 2 (subscript 2) support the hypothesized relationships. Hypothesis 1 that individuals perceive their economic, work, and social exchange relationships with the organization as distinct is supported. In both studies, exploratory and confirmatory factor analyses support the proposed three-factor structure of perceptions about the individual's exchange relationship with the organization. Hypothesis 2 that positive perceptions of different exchange relationships will be positively correlated is supported. In both studies, positive perceptions of the three exchange relationships show positive associations with significant correlations at the 0.01 level ranging from 0.40 to 0.66. This result suggests that there is a positive spillover effect among positive perceptions of different exchange relationships.

Economic exchange hypotheses. Hypothesis 3 that individuals' positive perceptions of economic rewards (perceived extrinsic rewards) strengthen their economic attachment to the organization (choice organizational commitment) is supported. In both studies this association is positive. The results are: $(\text{COC}, \text{PER})_1 = 0.24$; $p < 0.01$; $(\text{COC}, \text{PER})_2 = 0.10$; $p < 0.05$. Hypothesis 4 that the strength of individuals' economic attachment to the organization (choice organizational commitment) will not increase their propensity to engage in organizational citizenship behavior is only supported in Study 2: $(\text{OCB}, \text{COC})_1 = 0.19$, $p < 0.05$; $(\text{OCB}, \text{COC})_2 = \text{n.s.}$

Work exchange hypotheses. Hypothesis 5 that individuals' positive perceptions of job characteristics (perceived job characteristics) strengthen their work attachment to the organization (growth organizational commitment) is supported: $(\text{GOC}, \text{PJC})_1 = 0.51$, $p < 0.01$; $(\text{GOC}, \text{PJC})_2 = 0.74$, $p < 0.01$. Hypothesis 6 that the stronger the individuals' work attachments to the organization (growth organizational commitment), the greater their propensity to engage in organizational citizenship behavior is supported: $(\text{OCB}, \text{GOC})_1 = 0.26$, $p < 0.01$; $(\text{OCB}, \text{GOC})_2 = 0.36$, $p < 0.01$.

Social exchange hypotheses. Hypothesis 7 that individuals' positive perceptions of organizational support (perceived organizational support) strengthen their social attachment to the organization (normative organizational commitment) is supported: $(\text{NOC}, \text{POS})_1 = 0.38$, $p < 0.01$; $(\text{NOC}, \text{POS})_2 = 0.48$, $p < 0.01$. Hypothesis 8 that the stronger the individuals' social attachment to the organization (normative organizational commitment), the greater their propensity to engage in organizational citizenship behavior is supported: $(\text{OCB}, \text{NOC})_1 = 0.35$, $p < 0.01$; $(\text{OCB}, \text{NOC})_2 = 0.16$, $p < 0.01$.

Finally, the model explains a good portion of the variance in OCB, supporting the idea that situational antecedents of OCB play an important role in the development of these behaviors. The R^2 of the OCB regression equation is 0.25 for Study 1 and 0.18 for Study 2. The variation in OCB explained by this model is relatively high compared to other models in the literature (see Table 1 for a comparison).

Test of Alternative Explanations

We tested several alternative explanations using the data. First, Farh et al. (1990) find a direct relationship between perceptions of job characteristics (PJC) and OCB. In contrast, we propose that attachments mediate this association. To test our mediation hypothesis, we assessed whether the perception variables are directly related to OCB when attachments are excluded from the structural model. For Study 1, the relationship between PJC and OCB is weakly significant ($p=0.07$). For Study 2, all three perceptions have a significant relationship with OCB ($p<0.05$). The R^2 of the OCB regression equation for the model without attachments decreases from 0.25 to 0.06 in Study 1 and from 0.18 to 0.13 in Study 2. In both studies, the results support Fahr et al. (1990), but they also show that the model proposed here, with attachments as a mediating variable, has superior explanatory power to the model with only perceptions and OCB.

Second, Mackie and Hamilton (1993) and Fiske and Taylor (1991) suggest that perceptions and attachments involve reciprocal relationships. This was tested by comparing the model with correlations between perceptions and attachments against the structural model. The fit of the model with correlations showed no significant improvement for Study 1 (robust CFI = 0.94), and it was worse for Study 2 (Robust CFI = 0.91). In addition, a reversed model with attachments producing perceptions, and perceptions producing OCB, does not fit the data as well as the one proposed in this paper: there is a decrease in CFI for both studies (Robust CFI₁ = 0.89, Robust CFI₂ = 0.91).

Third, we originally hypothesized that economic exchange relationships and attachments would not encourage an individual's propensity to engage in OCB, and in fact might discourage it. In order to confirm the effect of the economic exchange variables on OCB, a second analysis was performed including only work and social exchange variables. The results show only small differences from the analysis including the economic exchange variables. The explained variation in OCB decreases only slightly for Study 1 (from the R^2 of 0.25 to an R^2 of 0.23), and does not change for Study 2. Moreover, the parameter estimates of the other structural relationships in the model remain essentially the same, with or without the economic exchange variables. This stability suggests that even though economic exchange variables may play a role in OCB, their effect is small and, for the most part, independent of the effects of work and social exchange variables.

We also analyzed three other models, each including only one set of exchange variables, to confirm that the higher levels of explained variation for work and social variables do not result from their shared variation with economic variables. As expected, the economic variables alone explain less variation in OCB ($R_1^2 = 0.06$; $R_2^2 = 0.00$) than the work variables alone ($R_1^2 = 0.15$; $R_2^2 = 0.17$) or the social variables alone ($R_1^2 = 0.18$; $R_2^2 = 0.11$). Finally, we tested a model without the work exchange components to assess whether we gain explanatory power with this new exchange relationship. The results ($R_1^2 = 0.23$; $R_2^2 = 0.11$) show that work exchange relationships do increase the explanatory power of the models with only economic and social exchange relationships.

Discussion

The results support the existence of work exchange as a relationship between individuals and organizations that is distinct from that of economic and social exchange. This finding is in line with previous results (Farh et al., 1990; Pearce & Gregersen, 1991) and

suggests that work exchanges play a significant and independent role as an OCB antecedent. The results also support the presence of spillover effects, in which positive perceptions of one exchange relationship are related to positive perceptions of the others. This contrasts with previous theory in which positive perceptions of exchange relationships exhibit zero-sum characteristics (Organ, 1990). The results also support the mediating role of organizational attachments in explaining OCB. Individuals' work and social exchange relationships with the organization increase their organizational attachments, and these attachments increase individuals' propensity to engage in OCB. As expected, while individuals' positive perceptions of economic exchange relationships influence economic attachment, this attachment does not exert an important impact on OCB. Finally, the theory tested in this study explains a relatively substantial portion of the variance of OCB when compared with previous studies.

This study has several limitations. First, the measure of Perceived Job Characteristics shows lower reliability than desirable ($\alpha_1 = 0.58$; $\alpha_2 = 0.52$), thus attenuating its effects on other variables (Schmitt, 1996). Given that these items are adapted from a well-recognized scale (Hackman & Oldham, 1975), we expect that they do sample the theoretical domain for this concept. It seems likely that the low reliability resulted from the Ministry's space limitations that prohibited inclusion of all the original PJC items. While the results are significant in the predicted direction, a higher reliability measure might increase their strength. Second, associations among variables from questionnaire data may reflect common methods variance rather than a true relationship (James, Demaree, & Wolf, 1984). This effect, however, does not seem to be a serious problem because both the exploratory and the confirmatory factor analyses identify these factors as distinct constructs. Moreover, the correlations among the factors are insufficiently large to suggest that common methods variance is a serious problem.

Third, the samples represent one occupation (physicians) in a specific cultural and socioeconomic setting (Spain). The effect of economic exchange relationships on OCB may differ in an occupation or organization that provides greater variability in salaries and job mobility, such as a sales manager or a business organization, than experienced by physicians working in Spanish hospitals. Also, physicians in Study 1 show higher levels and less variance in their Growth Organizational Commitment and OCB than physicians in Study 2. These differences may be due to a higher level of research activity in the convenience sample of Study 1. Some interviews with doctors from this sample revealed that research opportunities in university hospitals are an important source of positive perceptions of the work exchange relationship and it was also one of the reasons physicians gave for engaging in OCBs. Even though the age, gender, tenure, and professional roles are comparable across samples, differences in hospital type in the two studies appears to have influenced the loadings of the structural paths of the model. For example, choice organizational commitment is significantly related to OCB in Study 1 and not in Study 2. Our interviews showed that doctors in research hospitals have less mobility than in average hospitals. The difference in mobility may explain the differences in choice organizational commitment in the two samples. This suggests that the relative importance of some antecedents may depend on the specific organization and/or profession of the sample. Thus, the loadings of the structural model may not be generalizable to other samples. However, the model itself seems very stable across samples and may be useful for explaining OCB in other settings.

Finally, the data gathered for this paper are cross-sectional and do not measure the effect of individual characteristics such as age, sex, race, or education on OCB. On the one hand, exchanges are experiences. This implies that the model is dynamic and that the relative importance of exchanges may vary over time. On the other, personal characteristics may

make a significant contribution to an individual's commitment to an organization and thus to OCB. For example, the individuals in these samples are somewhat homogeneous and the framework may not work with a heterogeneous group. Moreover, individual characteristics may affect the relative contributions of different perceptions and attachments in explaining OCB. For example, continuance commitment tends to increase with age (Mathieu & Zajac, 1990). Older employees typically experience heavier financial burdens and fewer job alternatives than younger employees. Thus, the impact of economic exchange relationships on OCB may increase relative to the impact of work or social exchanges with the average age of the sample.

One area for theoretical development is exploring the criteria that define which perceptions and attachments to organizational experience predict OCB. In this study, we selected variables that seemed to fit each category, but these variables do not represent the complete range of possible variables. While the results of this study support the exchange framework, they do not provide any theoretical rationale for determining what other perceptions and attachments might or might not be included. For instance, do all positive perceptions of the work exchange relationship predict any work attachments? It seems possible that some positive perceptions are linked to specific attachments, and likely that some perceptions do not belong anywhere in the framework.

Another area for theoretical development is a comparison between situational OCB antecedents such as perceptions and attachments, and dispositional ones. To what extent is the propensity to engage in OCB something that people bring with them when they enter an organization, and to what extent is it something that can be encouraged through organizational design and control mechanisms? The results of this study suggest a portion of organizational citizenship behaviors do result from organizational experiences. However, Smith et al. (1983) suggest that organizational citizenship behaviors also result from individual personalities. Brief and Motowidlo (1986) concur that a prosocial personality exists and that individuals with such personalities are more likely to engage in OCB. Organ (1990) also proposes a framework that includes both situational and dispositional antecedents. Finally, Van Dyne, Cummings, and McLean Parks (1995) suggest that both attachments and individual differences are antecedents of OCB. These seem to be reasonable hypotheses; however, there is little empirical evidence for the relative importance of each group of antecedents. Understanding the relative impact of situational antecedents of OCB versus dispositional ones would hold significant implications for job design and employee selection criteria.

Future research might also examine to what extent employees' perceptions of exchange relationships reflect organizational reality. An employee might develop negative perceptions of his or her rewards even though they compare favorably with those of other employees. Or, an individual might develop positive perceptions of his or her rewards even though they are lower than those of other employees. This kind of analysis might reveal how employees' perceptions evolve from external reality, and would provide useful managerial insights into what policies, job descriptions, and reward structures best encourage OCB. □

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Appendix 1

THE INFLUENCE OF SOCIAL AND WORK EXCHANGE RELATIONSHIPS
ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR*Measures**Economic Exchange Perceptions:**Perceived extrinsic rewards* ($\alpha_1=0.76$; $\alpha_2=0.76$)

1. I can't complain about my salary in this organization.
2. The remuneration I receive in this organization is comparable to that I would receive in other organizations for the same professional work.
3. The remuneration I receive is fair in comparison with what other members of this organization receive.
4. I am happy with what I earn in this organization, taking into account the security of my job, the location, the benefits, and future expectations.

*Economic Exchange-Related Attachments:**Choice organizational commitment* ($\alpha_1=0.71$; $\alpha_2=0.62$)

1. Right now, staying with this organization is a necessity for me (a).
2. It would not be difficult for me to find an interesting job in another organization.
3. Moving to a different organization would be highly inconvenient right now (a).

*Work Exchange Perceptions:**Perceived job characteristics* ($\alpha_1=0.58$; $\alpha_2=0.52$)

1. The results of my work are tangible and can be evaluated.
2. I possess the necessary information to do my job well.
3. I have the autonomy to make my own decisions at work.

*Work Exchange-Related Attachments:**Growth organizational commitment* ($\alpha_1=0.72$; $\alpha_2=0.81$)

1. Working in this organization offers me opportunities to learn and grow professionally.
2. I really like working for this organization.
3. My work in this organization is not especially attractive (a).

Appendix 1 (continued)

*Social Exchange Perceptions:**Perceived organizational support ($\alpha_1=0.90$; $\alpha_2=0.91$)*

1. When I have a problem, the organization tries to help me.
2. The organization is really concerned about my welfare.
3. The organization takes my opinion seriously.
4. The organization is concerned about my overall satisfaction at work.

*Social Exchange-Related Attachments:**Normative organizational commitment ($\alpha_1=0.76$; $\alpha_2=0.75$)*

1. Right now I would not abandon this organization because of a sense of obligation toward the people I work with.
2. I do not feel any obligation to continue working for this organization (a).
3. I would feel guilty if I were now to abandon this organization.

Organizational Citizenship Behavior ($\alpha_1=0.72$; $\alpha_2=0.67$)

1. When the workload is most intense I work extra hours, by shortening the usual breaks or staying at work later than usual.
2. I frequently suggest new ideas to improve my department.
3. I only have to do the job I am paid to do (a).
4. Even when it is not required, I try to guide the new members of my department.

(a) Reverse scored.