

Mine or Ours: Email Privacy Expectations, Employee Attitudes, and Perceived Work Environment Characteristics¹

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Abstract

In spite of the growing importance of ethical and privacy concerns in the information age, there is a surprising paucity of academic literature on the subject. The research reported in this paper attempts to address this gap by focusing on privacy perceptions related to email. We adopt a behavioral perspective on the use of email in that we treat email policy as an embodiment of managerial beliefs and values about the employer-employee relationship and the role of communication in the workplace. Specifically, we examine employee attitudes towards email, their perceptions and expectations regarding the privacy and ownership of email, and a variety of work environment characteristics. Drawing upon prior theoretical work in organizational behavior and the use of email in work contexts, we propose a variety of research hypotheses. Data gathered from a sample of 193 respondents which includes email users from two different national contexts with different email policies in the host organizations is used to test the hypotheses. While we do not examine the effects of a specific policy in this study, our results nonetheless have interesting implications for organizations desirous of constructing an email policy. Theoretical implications as well as guidelines for practicing managers are offered.

1. Introduction

The electronic storage and dissemination of ever increasing quantities of information has recently raised significant concerns related to ethical and privacy issues. Fueled by high profile media coverage of events such as the Monica Lewinsky and Microsoft trial cases [12], public interest in privacy issues is escalating. Indeed, a perusal of the recent practitioner provides examples of several incidents of violations of individual privacy that were possible only because information was stored in electronic form. The observation made over 100 years ago by Brandeis and Warren (1890): “numerous mechanical devices threaten to make good the prediction that what is whispered in the closet shall be proclaimed from the housetops,” is becoming disturbingly true today.

According to a recent survey [1], electronic mail (email) is the most-used on-line work application, with 14.7 million business users. Indeed, electronic mail has been recognized as an important method for facilitating unstructured communication among employees; a valuable cross-fertilization of ideas [35] and increased innovation in the organization. However, there is also acknowledgement that the use of email can result in negative outcomes such as excessive time spent on unproductive work and a lack of attention to security [24].

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From an organizational perspective it would be clearly desirable to have employees utilize email in a manner consistent with managerial objectives. Thus, if managers seek to encourage unstructured interactions, email use for private communication should be encouraged, whereas if the organization regards email strictly as a means of efficiency in work-related communication, business-only use should be enforced. Unfortunately, the growth in email has preceded rather than followed the evolution of policies and, as a consequence, norms rather than edicts are used to guide employee behavior. Thus, there is very little systematic managerial knowledge about important issues such as the need for an email policy and the contents of such a policy.

Concerns related to the privacy of email in particular are further exacerbated by the organization's context. With increased globalization and workforce diversity, there is a need to understand the impacts of email policy and norms across different national cultural contexts. Privacy laws and general workforce expectations vary significantly across the world [23]. For instance, the United States is widely regarded as having perhaps one of the least developed and lax sets of privacy laws in the western world. In contrast, the European Union recently passed a European Data Privacy Directive which outlines stringent rules regarding the use of personal information by businesses [13].

In spite of the growing importance of ethical and privacy concerns in the information age, there is a surprising paucity of academic literature on the subject. The research reported in this paper attempts to address this gap by focusing on privacy perceptions related to email. We adopt a behavioral perspective on the use of email in that we treat email policy as an embodiment of managerial beliefs and values about the employer-employee relationship and the role of communication in the workplace. Data gathered from a sample of 193 respondents from two different national contexts with different email policies in the host organizations is used to test a series of research hypotheses. While we do not examine the effects of a specific policy in this study, our results nonetheless have interesting implications for organizations desirous of constructing an email policy.

2. Conceptual Background and Research Hypotheses

As noted above, with the exception of a handful of research studies, there is little academic literature focusing specifically on the issue of policy design and email usage. These studies together with recommendations made in practitioner literature are reviewed below.

2.1. Email Usage and Email Policy

In recent years, the practitioner literature reports an increasing number of instances involving issues of privacy and ownership of email. For example, two employees of Nissan Motor Corp. "were fired from their job... when management discovered they were receiving sexually suggestive e-mail messages" [39]. Nissan's lawyers successfully argued that supervisors have a perfect right to monitor anything created on a computer system that the corporation owns [11]. However, this right is not explicitly documented in any law, according to the Department of Justice in Washington [32]. In the absence of explicit laws in most cases "the courts have ruled for companies' rights over employees' privacy" [38]. Disturbingly, this reality seems to be ignored by employees. According to several authors [6] [40], employees have unfounded and in many cases, unrealistic expectations regarding email privacy.

Prior research offers at least four plausible explications for this paradox regarding employee expectations of the privacy of email. (1) *The technological view*: Some employees think email is private because of the illusion given by the login procedure and the existence of a password [6] [39]. There is an implicit assumption that because of the password, it is not possible for anyone to read their e-mail. Moreover, some also think that when they delete an email, there is no trace of the existence of the message. (2) *Analogy with the mail*: Employees erroneously believe that the same protection given to conventional mail is applied to email. They know that it is forbidden to open a letter addressed to someone else and they simply think, by analogy, that email is also private. (3) *Misguided feeling of security*: According to Weisband and Reinig (1995), the reduction of social context cues observed by numerous researchers when people use email result in a feeling of security. People would express themselves more openly than they would in the presence of a person or several persons, laboring under an illusion of privacy. (4) *The organizational view*: In the absence of regulations regarding proper usage of the email system, employees believe that email is private.

The unfounded expectation of privacy is a severe problem because conflicts can arise between employees who have an expectation of privacy and management who "wants to ensure their email systems are being used for appropriate, job-related activities" [8]. Therefore, the adoption and diffusion of an email policy is important not only because it can forestall litigation [6] [14] but also because it improves employee morale and employee relations by building employee trust [8]. The literature reveals that there are two predominant types of policies: one supports the use of email for private purposes and one does not. Organizations that have defined email as corporate property include Epson, Eastman Kodak, and

Du Pont, while General Motors, McDonnell Douglas, Citibank and others support the use of email for private purposes [6] [14]. Those two types of policies exemplify the debate and controversy between scholars and practitioners who are for the privacy of email and those who are against this notion.

Computerworld [5] [28] heard arguments from individuals representing each side of the issue. A representative stance of the not-for-privacy argument is that “everything that the company buys, pays for, supports or feeds power to ... can only be used for company work.” On the other hand, the individual against the monitoring practice principally argued that “a big brother attitude only squelches creativity”. In General Motors, Michael Kaminsky notes: “The company’s philosophy is that the workplace is an environment of mutual trust and respect. This precludes a policy of accessing employee email” [6]. Hartman [19] notes that employees could sense a lack of respect when there is a monitoring process, which could affect productivity or the culture in the organization. Generally speaking, one might expect that the impact of monitoring employee email could have the same negative effects as monitoring of other means of communication [10] [17].

Even in the presence of compelling evidence supporting the need for a policy, it appears that the majority of organizations in the US do not have one. According to a survey conducted by the Society for Human Resource Management in 1996, 36% of organizations have policies addressing proper email usage (more than 500 validated responses). Another survey conducted in the same year by Security Management Magazine found that only 47% of firms have established a formal corporate email policy.

In summary then, despite the significance of the issue of email privacy and implementation of email policy in today’s organizations, little literature addresses these topics. The goals of the research reported here are two-fold: (1) to further confirm or refute Cappel’s [7] findings about the expectation of privacy of real workers in a cross-cultural context, and (2) to explore the relationship between the existence of a policy and attitude toward the use of email, and other organizational outcomes.

2.2. Research Hypotheses

As is patently evident from the review above, email users generally believe that any email they send or receive is private. This belief appears to persist in spite of media coverage of cases where judges ruled otherwise. Cappel’s [7] study provided empirical evidence of this belief, while Weisband and Reinig [39] offer several explanations for the illusion of privacy. Consistent with this literature, we posit:

H1: Workers have a general expectation of privacy with regard to their email in the workplace.

Since the pioneering work of Hofstede [20], researchers acknowledge that national culture has a profound impact on shaping individual attitudes and beliefs. Indeed, Hofstede [20] cautions managers from utilizing an invariant set of managerial principles across multiple cultures. He defines culture as the “collective mental programming of the people in an environment.” It emerges from a series of life experiences and values widely held by the social environment in which an individual is situated. Thus, prevailing national culture and laws should influence individual expectations of privacy, in part. Even prior to the establishment of the European Union, several countries in Europe had privacy laws that were far stricter than those in the United States. Moreover, Hofstede’s empirical results indicated that France scores significantly higher than the United States on the cultural dimension of power distance and considerably lower on the cultural dimension of uncertainty avoidance. While the former dimension captures the extent to which individuals seek to conform to values held by the power elite of a society (as exemplified in the legal system, for example), the latter dimension implies greater conformance to formal rules and predictable behaviors. Further, unlike the United States where there is considerable discussion about the privacy of email and associated legal implications in mass media channels such as newspapers and television, in France, the situation is exactly opposite. There are no cases involving discussion between employers and employees about the privacy of email and email cannot be used as evidence. This absence of a legal precedent would suggest that workers in France would hold stronger beliefs about the privacy of email.

H1a: Workers in France have a greater expectation of email privacy than workers in the US.

In general, workers are motivated by performance related outcomes, and workplace behavior is driven by expectations of what the employer wants. Such expectations are typically communicated in the form of policies, procedures, and organizational routines [31]. Hence, one would predict that different email usage behavior patterns would exist in environments with an email policy that permits or encourages personal use of email, versus environments that do not have such a policy. In the absence of a formal policy, behavior should be driven by what an employee believes to be true about the ownership of email. This expectation is tested through:

H2: Worker expectations regarding the privacy of email in the workplace have a significant influence on the nature of their email usage in the workplace.

As noted above, the national culture of France has been characterized as exhibiting high power distance and

strong uncertainty avoidance. In contrast, the United States exhibits a low power distance and weak uncertainty avoidance. In the latter case, there is a greater tolerance for ambiguity and typically, individuals are willing to incur greater risk. Thus, employees in the United States are likely to be less influenced in their email usage behavior by their expectations of privacy. In France, on the other hand, the need to “follow rules” suggests that beliefs about rules will have a stronger influence on behavior.

H2a: The impact of worker expectations regarding the privacy of email in the workplace on the nature of their email usage in the workplace is stronger in France than in the US.

All organizations seek to regulate behavior through the establishment of explicit procedures, codified as rules and regulations, or implicit controls, enforced through social norms [31]. In general, employees will attempt to conform to such organizational expectations. When expectations are explicitly stated in the form of policies, incentive/reward theories [21] suggest that such policies will direct behavior. The absence of a specific policy regarding the use of a workplace technology, or even the existence of a policy that is not enforced, suggests that managers are willing to accord workers the freedom to interpret and use a particular workplace technology in the manner they deem appropriate. Such autonomy should result in more positive workers’ attitudes towards the technology. Conversely, if specific uses of the technology are strictly enforced through regulations, negative attitudes may result. Thus we posit,

H3: Workers who perceive their email usage behavior to be influenced by email policy will have more negative attitudes towards the use of email than workers who do not perceive their email usage behavior to be influenced by email policy.

Triandis’ [37] theory of purposive human behavior argues that a large number of behaviors are driven by habit. Thus, if employees utilize a technology in a particular way in the workplace, assuming that the technology is available elsewhere, it is likely they will continue to sustain that behavior pattern outside the workplace. This would be especially true if the specific technology could be utilized for work as well as non-work related activities, as is the case with email. If such an expectation is supported, it clearly has important implications for managers desirous of diffusing new technologies to employees. Hence, we test the hypothesis:

H4: Email usage patterns outside the workplace are similar to email usage patterns in the workplace.

Prior research has established that information technologies generally exhibit interpretive flexibility and can be appropriated in a variety of ways by users [30]. Moreover, theories of job design suggest that workplaces

characterized by greater autonomy, trust, equity, and organizational commitment promote employee motivation and their sense of well-being [18]. In such workplaces, employees will seek to reinforce the prevailing situation by appropriating available technologies in ways that enhance the quality of the work environment. Thus, to the extent that a technology can support greater social interaction among workers, facilitate unstructured communication, and contribute to developing a sense of community, supportive work environments should lead to such capabilities being exploited. In the case of email, one would expect that a supportive work environment would result in greater use of email for personal communication. These expectations are tested through the following hypothesis:

H5: Worker perceptions of autonomy, trust in their supervisor, perceptions of being monitored at work, perceptions of equity in the workplace, and organizational commitment significantly influence email usage patterns in the workplace.

Following from the arguments presented above related to persistent patterns in human behavior as conditioned by habit, we also test:

H5a: Worker perceptions of autonomy, trust in their supervisor, perceptions of being monitored at work, perceptions of equity in the workplace, and organizational commitment significantly influence email usage patterns outside the workplace.

While the work environment characteristics described above can potentially be influenced by many factors, one important source of influence is managerial policy. When employees regard their behavior as being strongly influenced by policy, they will experience a loss of freedom and personal volition, i.e., autonomy in the performance of work is reduced. Stringent policies are likely to negatively affect the supervisor-subordinate relationship with regard to the subordinate’s trust in the supervisor, their sense of work being closely observed and monitored, and an overall feeling of equity in the workplace. Organizational commitment is also expected to be low when employees perceive a loss of control and self-determination in technology usage behavior. Hence, we posit:

H6: Workers who perceive their email usage behavior to be influenced by email policy will regard their work environment as exhibiting lower autonomy, will have less trust in their supervisor, higher perceptions of being monitored at work, lower perceptions of equity in the workplace, and lower organizational commitment than workers who do not perceive their email usage behavior as being influenced by email policy.

The empirical study conducted to test these hypotheses is described next.

3. Methodology and Results

3.1. Study Contexts and Sample

The research strategy employed is a field-based survey of email users in different organizational contexts. Consistent with the research objectives and to obviate the problem of differences in outcomes being confounded by the nature of the business, two “similar” organizations in the United States and France were targeted. Both organizations were universities; the university located in the United States has an explicit email policy in place. This policy notes that all employees may “freely communicate and access information on electronic networks.” It further states that staff should challenge any attempts to censor electronic information sources. However, the policy also explicitly notes that the University cannot guarantee absolute privacy of electronic communication. Moreover, all computer users are required to observe and comply with federal, state, and local laws in effect. All employees of this university are employees of the state. This particular state has a law which treats any communication by a state employee on employer time as completely non-private. In contrast, the university in France has no explicit email policy in place.

Target respondents for the study were administrative employees in both universities. These employees perform tasks which are analogous to the functions of any business organization such as general administration, accounting, project management, and secretarial work. Faculty were deliberately excluded from the study because of the possibility of their email usage behavior being influenced by notions of academic freedom and protection of intellectual property. A survey containing demographic questions as well as multi-item scales to measure all research questions was designed, pilot tested, and distributed to all administrative employees in both institutions. In the US institution, a survey was mailed to every administrative employee; a population of approximately 1900. A target date for returning the survey to the researcher was specified two weeks after receipt of the survey. Respondents were assured of confidentiality. Identical procedures were utilized for data collection in France. In the US, 263 usable surveys were returned for a response rate of 15%. After excluding faculty from the respondent set, (some faculty also hold administrative positions such as department chair and dean, and were therefore on the original mailing list), a sample size of 151 remained. In France, 725 surveys were mailed, and 42 usable responses returned, for a response rate of approximately 6%. The lower response rate in France can be attributed to the fact that the diffusion and availability of email in France is considerably less than in the United States. This is further

supported by the fact that an additional 30 surveys were received in France where respondents indicated that they did not have access to email. The two response rates, although less than ideal, are fairly consistent with reported response rates of mail surveys.

3.2. Operationalization of Research Constructs

A majority of the research constructs were operationalized using multi-item measurement scales (see Appendix). To the extent possible, previously developed and validated scales were adapted for the survey. When no such scale existed, items were constructed and subject to a pilot test. Expectations of email privacy were assessed using a 3-item scale. Attitude toward email was measured by items adapted from standard attitude scales (e.g., [36]), while perceptions of autonomy were measured using four items drawn from Hage and Aiken [2]. Scales for trust in supervisor and equity were taken from McKnight [25], whereas organizational commitment came from Mowday, Steers, and Porter [27]. Respondents scored all items on a 7-point Likert scale with “Strongly agree” (1), “Neutral” (4), and “Strongly disagree” (7) as the scale anchors.

The initial instrument was subject to a qualitative pilot test. Five administrative employees from two different organizations (the US university and a local hospital) completed the survey and were then interviewed for about an hour. The interview was focused on identifying possibly confusing items on the survey and clarifying the meaning further. The pilot resulted in modest changes being made to the wording of some items. This instrument was then translated into French and pilot tested using an identical procedure.

3.3. Data Analysis and Results

Sample demographics are shown in Table 1.

Variable	Mean	Standard Deviation	Valid N
Number of years with organization	8.80	8.31	191
Number of years in the work force	17.33	10.89	185
Supervisory span	6.68	26.78	179
Number of years using email	4.96	3.54	188
Frequency of email use	5.67	0.88	193
Number of hours per day using email	1.05	0.69	183
Notes: n = 193			
Frequency of email use is measured on a 6-point scale; 6 = several times a day, 5 = once a day; 4 = few times a week, 3 = few times a month; 2 = rarely; 1 = never.			

On average, respondents had spent 8.8 years in their current organization and over 17 years in the workforce. A majority of them were in supervisory positions, being

responsible for approximately 7 employees. Respondents had used email for a period of five years, and spent approximately an hour each day using email. These demographics suggest that the sample profile obtained in the study was appropriate for the research objectives: the final sample consisted of employees who had significant workforce experience as well as email experience.

Table 2 provides descriptive statistics for all research constructs. As the data indicate, adequate reliability was obtained for all multi-item constructs, further enhancing the internal consistency of the measures (Nunnally, 1978). Convergent and discriminant validity of the measures was further established through a factor analysis procedure, the results of which are reported in Table 3.

A principal components factor analysis with varimax rotation yielded seven factors with eigen values greater than 1 which collectively accounted for 73.2% of the variance.

Hypotheses 1 and 1a, which posited that workers would have expectations of email privacy and these expectations would be stronger for workers in France, were tested using one-sample and independent sample t-tests (Table 4). For the entire sample, as well as for the US and France samples separately, expectations of email privacy were significantly positive. No differences were observed, however, between privacy expectations among American and French workers. Thus, H1 was supported while H1a was not. The non-significant results for France suggest that expectations of email privacy are pervasive and workers in all cultures possess such beliefs, further extending the findings in prior research.

Construct	Mean	Standard Deviation	Reliability ~
Expectation of privacy (PRIV)	3.61	1.64	0.69
Email use at work (WORKUSE)	3.69	0.79	*
Influence of email policy (EMPOL)	3.82	1.62	*
Attitude toward email (EMATT)	1.97	1.01	0.85
Email use at home (HOMEUSE)	3.15	1.15	*
Perceptions of autonomy (AUT)	4.67	1.58	0.79
Trust in supervisor (TRUST)	2.80	1.56	0.93
Perceptions of being monitored (MON)	4.57	1.50	0.83
Perceptions of equity (EQUITY)	3.44	1.45	0.92
Organizational commitment (COMMIT)	2.42	1.09	0.86
Notes: ~ Cronbach's alpha is reported * Single-item measures See Appendix for measurement scales			

Item	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7
TRUST3	.831						
TRUST2	.817						
TRUST1	.813						
TRUST4	.792						
EQUITY2		.815					
EQUITY1		.810					
EQUITY3		.807					
EQUITY4		.777					
COMMIT3			.821				
COMMIT4			.790				
COMMIT2			.777				
COMMIT5			.570				
COMMIT1			.469				
EMATT3				.882			
EMATT2				.855			
EMATT1				.776			
EMATT4				.753			
MON3					.839		
MON1					.827		
MON2					.793		
AUT2						.811	
AUT1						.806	
AUT4						.737	
PRIV3							.796
PRIV1R							.773
PRIV2R							.727
Eigen value	7.77	3.03	2.71	1.67	1.50	1.24	1.10
% variance	29.89	11.65	10.43	6.44	5.78	4.78	4.23
Notes: The factor analysis used principal components extraction with varimax rotation. Only loadings greater than 0.4 are shown.							

Table 4.
Expectations of Email Privacy (H1 and H1a)

	Mean	t-value	p-value
Whole sample	3.61	-3.29	.001***
US only	3.68	-2.44	.016**
France only	3.36	-2.36	.023**
US versus France	0.31	1.09	.298

Notes: One sample t-tests were performed to test for significant differences from scale midpoint (4)
US and France were compared using an independent samples t-test
*** significant at $p < .01$
** significant at $p < .05$.

H2 and H2a asserted that expectations of privacy would influence patterns of email use in the workplace. These hypotheses were tested using a regression procedure with workplace use as the dependent variable and expectations of privacy as the independent variable (Table 5).

Table 5.
Effect of Expectations of Privacy on Workplace Use of Email (H2 and H2a)

WORKUSE	Regression F	Beta	t-value	p-value
Whole sample	12.84	.252	3.58	.000***
US only	6.25	.201	2.50	.014**
France only	7.75	.407	2.78	.008***

Notes: Standardized beta coefficients are reported.
*** significant at $p < .01$
** significant at $p < .05$.

The regression F was significant for all three samples (combined, US only, France only). The positive beta obtained for all three regressions suggests that workers with greater privacy expectations tend to use email for both personal and work-related communication. The beta coefficient for the France only sample was more than twice that of the US only sample, and almost twice the entire sample coefficient. These results provide empirical support for both H2 and H2a.

The relationship between perceived influence of email policy and attitudes toward the use of email (H3) was tested by examining the Pearson correlation between the two constructs. This correlation (Table 6) was .219 ($p < .01$) for the combined sample, .188 ($p < .05$) for the US sample, and .267 (non-significant) for the French sample. Thus, H3 was supported. While a difference between US and French samples was not specified *a priori*, it is nevertheless interesting to see that the relationship was not significant for French workers. One plausible explanation for this could be that employees in the French university were aware that no specific email policy was in existence. Alternatively, drawing upon Hofstede's (1980) characterization of national culture, it might be that in cultures such as France where employees commonly seek to conform to rules and regulations, policies are generally

not regarded as tools of managerial control and hence, are not viewed in a negative light.

Table 6.
Relationship Between Perceived Email Policy Influence and Attitudes Toward Email (H3)

	Pearson Correlation: EMPOL and EMATT
Whole sample	.219***
US only	.188**
France only	.267

Notes: *** significant at $p < .01$
** significant at $p < .05$.

Hypothesis 4 stated that through a process of habituation and routinization, email usage patterns in the workplace would be similar to email usage patterns outside the workplace. To test this hypothesis we first eliminated all respondents who did not access their employer's email at home from the sample. Results from the remaining respondents are shown in Table 7. The correlation between nature of workplace use and nature of home use of email was significant for the combined sample as well as for the US only sample. Thus, workers in the United States who exhibit a particular pattern of use at work (i.e., a specific combination of personal and work-related utilization), tend to reinforce the same pattern at home. The non-significant relationship in France is perhaps attributable to the small sample size. Email access at home in France is not as prevalent as in the United States – only 9 users from France indicated that they accessed their employer's email at home.

Table 7.
Relationship Between Workplace Use and Home Use (H4)

	Correlation: WORKUSE and HOMEUSE
Whole sample	.370***
US only	.357***
France only	.476

Notes: *** significant at $p < .01$
Pearson correlations are reported for the whole sample and for the US; because of small N, Kendall's Tau is reported for France

Salient work environment characteristics were posited as influencing workplace as well as home usage patterns of email in hypotheses H5 and H5a. These were tested using a general linear model procedure with all work environment characteristics as predictors of work use and home use (Table 8). For work use, perceptions of workplace equity were weakly significant, while organizational commitment was highly significant. In the case of home use, perceptions of autonomy and equity were weakly significant ($p < .1$), while organizational commitment was highly significant. In this sample, worker trust in supervisor and perceptions of being

monitored did not exhibit any relationship with email usage patterns in the work place or at home.

Table 8.
Influences on Workplace Use and Home Use of Email (H5 and H5a)

Construct	WORKUSE		HOMEUSE	
	F-value	p-value	F-value	p-value
AUT	1.21	.272	3.25	.076*
TRUST	0.28	.501	0.16	.690
MON	0.19	.662	0.30	.589
EQUITY	3.40	.067*	3.79	.056*
COMMIT	4.64	.033**	5.49	.022**

Notes: A general linear model procedure was used for the above analysis.
 ** significant at $p < .05$
 * significant at $p < .1$

The final hypothesis asserted that the extent to which workers' viewed the email policy as influencing their behavior would have a significant effect on their perceptions of all the work environment characteristics examined above. Because of the existence of multiple, correlated dependent variables, a multi-variate analysis of variance procedure was utilized to test H6 (Table 9). Perceptions of policy enforcement exhibit a significant influence on perceived autonomy at work, as well as on perceptions of being monitored, but no influence on trust in supervisor, equity, and organizational commitment. Thus, partial support was obtained for H6.

Table 9.
Effects of Perceived Influence of Email Policy: MANOVA Results (H6)

Overall Multivariate Test: $F = 2.13$; Pillai's Trace = .06		
Construct	F-value	p-value
AUT	5.10	.025**
TRUST	0.25	.746
MON	10.42	.030**
EQUITY	1.45	.403
COMMIT	0.69	.446

Notes: ** significant at $p < .05$.

Prior to discussing the implications of the findings, some limitations must be acknowledged. We conducted the study in only two organizations, therefore the generalizability of the findings is necessarily limited. Nevertheless, there is no reason to believe that an administrative employee at a university would be substantially different from one in another type of business. Predictors and outcomes were measured at the same point in time in our cross-sectional survey, hence it is difficult to ascribe causality. The cross-sectional nature of the study also raises the possibility of common method variance. In spite of these limitations, however, the study provides interesting insights into a relatively unexplored phenomenon.

4. Implications and Conclusion

Several implications follow for both theory and practice. The results suggest that expectations regarding the privacy of email in the workplace have significant influence on the nature of employee email usage in the workplace. These expectations could be an outcome of the diffusion of a policy in the organization. Thus, a policy may have a direct effect on the way people use email in organization. Hence, it is appropriate to recommend that employers adopt and diffuse a policy when they want to induce specific, defined behaviors among employees.

The results also show that employees considerably misinterpret the law. This suggests that there is a gap between the employers' perception of proper email usage and employees perception of proper email usage. It is well known that conflicts arise because of a lack of communication. Conflict in organizations is a source of stress, inefficiency, lost of trust, and has an overall effect on productivity. Managers need to communicate their perception of proper email usage, especially if they think they have the right to monitor email whenever they want to. While this implication is not new, at least in the non-academic literature, this study provides further evidence of its importance. Moreover, the study shows that a policy has a significant impact on the way people use email.

One interesting finding relates to the fact that employees appear to exhibit the same usage of email at home as they do at work. Employers must be aware of that. The frontiers of the organization are not as clear as it would appear. It could be that an employee takes 5 minutes of a work hour for a personal communication via email. But it could also be that the same employee takes 10 minutes of an hour at home for a work-related communication via email. Managers must pay careful attention to this finding when they try to design an email policy. Moreover, it is now possible to send and receive email via a hand-held cellular phone from the car while sitting in traffic, or from a restaurant, or when on vacation. The frontiers between "Work Hour/Non Work Hour" will become less and less meaningful.

The results show that the usage of email is significantly influenced by organizational commitment; higher organizational commitment implies that workers use email more for work-related rather than personal communication, both at work and at home. This means that it could be more productive for managers (who want their employees to use email only for work related purposes) to try to create such an environment in which workers may feel committed than to try to enforce their usage of email with stringent email policies.

From the perspective of theory development, while we have provided preliminary insights into the relationship

between the influence of an email policy and work environment characteristics, fruitful work remains to be done linking the content of email policy to factors that influence productivity in the workplace. In further research, we will study different outcomes (such as employee satisfaction, use of email, attitude toward email) in organizations with a wide range of email policies.

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**Appendix
Constructs and Items²**

Expectation of privacy (PRIV)

1. Regardless of the law, I believe my supervisor has the right to read my email.**
2. When I send email, I typically do not have an expectation of privacy.**
3. Any email I send is exclusively my property.

Email use at work (WORKUSE)

Please characterize your current usage of email in your **workplace** by checking one of the following:

<input type="checkbox"/> Use email <u>only</u> for personal communication	<input type="checkbox"/> Use email <u>primarily</u> for personal communication	<input type="checkbox"/> Use email <u>equally</u> for personal communication and work related communication	<input type="checkbox"/> Use email <u>primarily</u> for work-related communication	<input type="checkbox"/> Use email <u>only</u> for work-related communication
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Email policy enforcement (EMPOL)

1. The email policy is a significant influence on the way I use email here.

Attitude toward email (EMATT)

1. I find email an efficient medium of communication.
2. I believe email is an effective way to communicate with others in the workplace.
3. I enjoy using email to communicate.
4. Overall, using email is fun.

Email use at home (HOMEUSE)

Please characterize your current usage of your **employer's** email **at home** by checking one of the following:

<input type="checkbox"/> Use email <u>only</u> for personal communication	<input type="checkbox"/> Use email <u>primarily</u> for personal communication	<input type="checkbox"/> Use email <u>equally</u> for personal communication and work-related communication	<input type="checkbox"/> Use email <u>primarily</u> for work-related communication	<input type="checkbox"/> Use email <u>only</u> for work-related communication
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Perceptions of autonomy (AUT)

1. In this department even small matters have to be referred to someone higher up for a final answer.
2. Any decision I make has to have my boss' approval.
3. There can be little action taken here unless a supervisor approves a decision.

Trust in supervisor (TRUST)

1. I can always rely on my supervisor's support regarding an important issue.
2. I believe my supervisor will make decisions that are the best for me.
3. When an issue that is critical for me arises, I feel I can depend on my supervisor.
4. Overall, I trust my supervisor.

Perceptions of being monitored (MON)

1. I often feel that my supervisor is observing my work.
2. In this department management supervises employees closely.
3. Employees are closely monitored in this organization.

Perceptions of equity (EQUITY)

1. I work in an environment in which good procedures make things fair and impartial.
2. Our work environment promotes fairness.
3. Our workplace has processes that assure fair and equitable treatment.
4. In this workplace, sound practices exist that help ensure fair and unbiased treatment of employees.

Organizational commitment (COMMIT)

1. This department inspires the very best in me in the way of job performance.
2. I am willing to sacrifice to help this department meet its goals.
3. I am willing to put in a great deal of effort to help this department succeed.
4. I show by my actions that I really care about the fate of this department.
5. I feel a certain sense of community with my co-workers in this department.

² All items except WORK and HOME are measured on a 7-point scale; 1 = Strongly agree, 4 = Neutral, 7 = Strongly Disagree.