

SOMETIMES YOU CAN'T MAKE IT ON YOUR OWN: WORK ARRANGEMENTS

AND CO-WORKER RELATIONS

By

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To Stan Cochran, Teresa Cochran & Melissa Cochran. I would not have made it through  
without you.

To Sarah Glynn. Diamonds do not let their shine get stolen.

and

To James Benjamin Bolling.

## *Introduction*

As the economy continues to ebb and flow, firms and organizations make changes in order to maintain productivity and profits. One of the primary changes that firms enact is the way in which work within the organization is arranged (Smith 1997). These changes have seen American organizations move away from more bureaucratically-organized work, which is characterized by hierarchical specialization, toward flexible work forms, referring to techniques and routines firms use to break down bureaucracies and increase efficiency in the workplace. These can include utilization of fewer resources through the use of smaller numbers of employees who are hired on project-based contracts, as well as the employment of workers who are knowledgeable and constantly learning new skills, and are allowed to work autonomously (Heydebrand 1989; Smith 1997; Neff, Wissinger & Zukin 2005). The introduction of more autonomous work, while seemingly positive for the worker, can have negative consequences for the organizational culture of the firm in which that individual works. Work arrangements that encourage worker autonomy have increased as we moved into the 21<sup>st</sup> century and continue to be pervasive today (Damarin 2006). This move toward flexibility and more autonomous work has created work environments that produce particular kinds of organizational cultures that rather than increase productivity may actually alienate workers from their work, their supervisors, and their co-workers.

This study examines two hypotheses regarding work arrangements and organizational culture, here as co-worker relations, in the workplace. The uncertainty hypothesis attributes the impact of work arrangements on co-worker relations in the workplace to the level of uncertainty workers experience. The work attitudes hypothesis

attributes the impact of work arrangements on co-worker relations to a worker's work attitudes. The analysis conducted here provides more support for the uncertainty hypothesis; no support was found for the work attitudes hypothesis. The results suggest that co-worker relations are enhanced by work arrangements that reduce uncertainty.

Co-worker relations have been shown to be related to a number of workplace practices including the glass-ceiling (Maume 2004), job entitlement (Wallace & Leicht 2004), career outcomes, work attitudes, and discrimination. The glass ceiling refers to the idea that women and racial and ethnic minorities are hired by firms that are dominated by white men, yet they do not reach the same hierarchical heights that white men do (Maume 2004). Job entitlement means workers believe their job is a right of their corporate citizenship (Wallace & Leicht 2004). Career outcomes are the occupational results that workers experience from working in their particular occupation or firm—promotion, upward mobility into upper-tier occupations, access to job authority, job displacement, and downward occupational mobility (McBrier & Wilson 2004). Work attitudes are how the individual feels about their work, their place in the firm, and their levels of commitment to the firm. Discrimination, for my purposes, is when a member of any marginalized minority group, race, gender, or otherwise, is not hired or not promoted due to their marginalized status. Each of these practices is borne out of co-workers interacting with each other. Although co-worker relations have been shown to be connected to many concepts that sociologists of work are interested in, there has been little work done that explicitly examines co-worker relations as a dependent variable.

Research has been increasingly directed at how different work arrangements operate and how they affect the way work is done. This has included work by Smith

(1997), Hodson (2001), Florida (2002), Beck (2003), Frenkel (2003), Kalleberg (2003), Broschak et al (2008) and Hacker (2008). These scholars have studied the many aspects of different kinds of work arrangements, namely comparing bureaucratic forms to flexible ones, and the individual effects those arrangements have for workers. Few have studied the effect that these work forms have on the social environment in which those arrangements are enacted. The understanding we have of different work arrangements is incomplete and perhaps misguided because we have not examined the sociology that exists within the workplace. As organizations and firms continue to enact different work arrangements, sociologists of work should include the workplace, and the organizational cultures emerging from different work arrangements, as part of our understanding of the effects those arrangements have for workers and management alike. It seems that we are often more interested in the “how” things exist at work and focus less on the “why” particular practices exist. Studying the organizational culture and work arrangements can help us understand the latter.

The results found in this study fill in the holes left by the literature regarding work arrangements and the workplace. We know how different arrangements work for the organization; we know the effects it has on individual workers. Taking the lead from others, I examine the connection between work arrangements and individual interpretations of the workplace—those that come from and are maintained by the workplace itself. The workplace exists as a site of interlocking and interacting relationships that work toward a common goal, mission, or product. Those relationships are co-worker relations. It is co-worker relations, those that are created between workers, supervisors, and management, that this study is able to link to work arrangements. While

it exists as a first step in understanding the effects of different work arrangements on organizational culture, this research builds on what others have done and extends it as a means of deepening our understanding of the 21<sup>st</sup> century worker and workplace.

In this paper, I first summarize the current literature regarding co-worker relations and define the term. Next, I describe the 2002 General Social Survey dataset that was used for the analyses, as well as the conceptualization and operationalization of the main concepts: work arrangement, uncertainty, work attitudes, and co-worker relations. Following the data analysis and its interpretation, I conclude by summarizing the main findings, discussing the implications of this project for future research, and suggest practical uses this study may serve.

#### *Defining co-worker relations.*

While there has been no systematic study or definition of co-worker relations, other scholars have worked with concepts that I have drawn on as a means of defining what co-worker relations means for this project. The concept that is perhaps most similar to how I have defined co-worker relations is *organizational culture*. The dominant definition of organizational culture comes from Andrew Pettigrew (1979) who conceived of it as a set of collectively accepted and understood symbols, language, beliefs, meanings, and norms that operate for a particular group at a particular point in time. This culture acts as a socializing force in the workplace that can bond people together or act as a barrier to positive co-worker interactions. Other scholars who share Pettigrew's understanding of organizational culture include Swidler (1987) and Jermier et al (1991). Pettigrew (1979) emphasizes the role that language plays in the workplace socialization

process, writing that it is through language that these symbols, norms, beliefs, etc. are communicated. Co-worker relations exist as a product of the organizational culture that is found in every firm. They exist because they are a result of “the way things are done”. For today’s organizations, the values that a worker may hold regarding their work often materialize out of the culture of their workplace.

Pettigrew’s (1979) study was one of the first important specifications of organizational culture. He defined it as being concerned with the effects of management styles and techniques related to how the organization actually incites members to work (ibid). Those who are responsible for running the firm must create ways to insure worker productivity without alienating workers from their jobs to the point where production is reduced. These techniques often manifest themselves in the formal and informal structures that dictate individual work roles. They also exist as behavioral prescriptions that inform the positive or negative “atmosphere” of the organization. It is this “atmosphere,” or culture, that management is responsible for producing, maintaining, and controlling. I will now address several key characterizations of co-worker relations that comprise portions of the limited literature on this increasingly important concept.

When other organizational culture researchers have conceptualized culture, they rarely, if ever, use “culture” verbatim to describe what they are studying. For many, interest is in the rules, laws, and policies that govern work and behavior within the firm that affect how individuals work. They study culture without ever referring to it as such. James Lincoln and Arne Kalleberg (1990) wrote on the role of managerial control on worker commitment. Without explicitly stating an interest in exploring organizational culture, these authors implicitly analyze culture as it relates to work values, or a worker’s

subjective attitude toward their specific job and their company, and job stability (ibid). These values are derived from interactions individuals within the firm have with one another and with management. While job stability is out of many individual workers' control, it can foster or discourage particular behaviors, and also inform individual work values. Job stability is only determined by management. In this basic sequence, we can see how management's control of the frequency of hirings and firings can influence how workers make sense of their workplace and their job.

Managerial control extends beyond decisions made by managers as to who is employed by the firm. They are also responsible for the creation and perpetuation of what is acceptable workplace behavior. Workplace behavior is indicative of workplace relations. Some organizations have cultures that support specific behaviors that others do not. One kind of workplace behavior that can sometimes be supported by a firm's culture is workplace bullying. Randy Hodson, Vincent Roscigno, and Steven Lopez (2006) give us bullying as an example of how scholars have looked at co-worker relations and managerial control as linked phenomena. While they do refer to culture, they use "organizational context" when discussing culture. Their concept of organizational context, or culture, is produced through the interaction of the following three factors: transparency, accountability, and capacity (Hodson et al 2006). These factors affect the likelihood of workplace bullying occurring. Transparency is related to how visible the bullying is to all members; accountability refers to the likelihood that bullying behaviors will reflect negatively for the bully; and capacity is understood to be the individual organization's ability to control and compel workers through the use of clear rules and rewards (ibid). They attribute bullying to management and how leaders within the



organization either allow or discourage a culture that allows these negative behaviors to occur. A firm that is “well-run and coherently organized” and one that is bureaucratically organized find themselves with increased levels of transparency, accountability, and capacity—resulting in a decreased likelihood for bullying. These features of a coherent and bureaucratic organization are decided by management and not individual workers. Again, we are able to see how management is able to control the interactions and behaviors that occur within the firm, and ultimately the kinds of relations workers have with each other. They are responsible not only for the bullying that occurs in response to lower-level members, but they also are responsible for the creation of a workplace atmosphere that either is or is not conducive to bullying.

Management controls who exists as organizational members and often dictates how members should interact with each other. This control also extends to the way in which the individual worker does their job. The kinds of work arrangements that a firm adopts are chosen by management. Research into workplace arrangements also provides evidence of the way in which co-worker relations are shaped by managers. Arne Kalleberg (2003) examined the effect that the introduction of flexibility by management as a means of controlling their available workforce, bringing in workers when necessary and cutting them loose when their services are no longer needed. This kind of worker is present in many of today’s organizations (Smith 1997; Florida 2002), and these kinds of work arrangements have particular effects on the worker that were not previously seen under other arrangements. Kalleberg (2003) says that this arrangement produces workers with weak ties to their firm, who are not on that particular job for an extended period of time or they are hired on an as-needed basis, and that they receive few if any benefits.

These workers are often seen by permanent members of that firm as employees of a temporary agency, not as “one of us” (Smith 1997; Kalleberg 2003). Contract-based and contingent labor arrangements produce this dichotomy in the workplace: those whose jobs are guaranteed and those who are bound to be let go. While these have proved to be beneficial for managers and supervisors as cost-effective methods of production (ibid), they also produce feelings of insecurity and uncertainty for those workers who experience this kind of work arrangement. While he does not address the effect that flexible work arrangements have on the way the workers interact with one another, this study does recognize the effect flexible arrangements have for the organization and those within it.

Work arrangement has effects on the way workers interact with each other. As we have seen, flexible arrangements who encourage autonomy can have negative effects on the ways flexible workers interact with permanent workers. These kinds of work arrangements, however, can also affect the interpretations workers have of their workplace. Joseph Broschak, Alison Davis-Blake, and Emily Block (2008) were also interested in examining the effect of non-standard work arrangements on workers, specifically their work attitudes. Echoing other organizational scholars’ understandings and findings regarding the effects of flexibility on the worker, they state that workers who are engaged in non-standard arrangements are often detached or only somewhat connected to the firm in which they work and recognize the importance employee work attitudes have for managers who are creating the work arrangement for their organization. Further, they find that attitudes and behaviors of workers should vary because of their employment arrangement (ibid). Also, they write that work arrangement has a strong influence on workers’ attitudes regarding their job and their workplace, and their

workplace behaviors. The study these scholars conducted analyzed the relationship between work arrangements and work attitudes for both standard and non-standard workers. They found that work arrangements affect work attitudes, and vary across different non-standard jobs. However important work attitudes are, Broschak et al (2008) do not address what impact those attitudes of workers employed in standard or non-standard arrangements.

While others have separately discussed the effects of uncertainty and work attitudes on co-worker relations, there has been little work that has addressed the effects of work arrangements on co-worker relations. However, Stephen Frenkel (2003) addresses workplace relations in his introduction to a special edition of the May 2003 *Work and Occupations*. Like the others who have been reviewed here, Frenkel (2003) focuses on the relationship between work arrangements and those who create them: management and supervisors. He discusses the role that non-standard arrangements have had for the American workforce, including increased uncertainty and job insecurity (ibid). Organizations have been forced to innovate, due to market forces, and flexible and non-standard arrangements have been one of the primary mechanisms that have proved successful (ibid). Flexible and non-standard arrangements have emphasized autonomy and the propensity for skill enlargement through advanced training and more involved work for the worker. These “benefits,” as Florida (2002) would have us believe, can also exist as methods of control enacted by management to insure they get their products created with workers who are not distracted and can work when they perceive it to be convenient for them (Frenkel 2003). However, as Frenkel (ibid) notes, workers who experience flexible and non-standard arrangements “reciprocate by showing limited trust

in management” (2003: 147). The strained relationship between workers and management is a product of the increased rate of organizational change, as management makes attempts to find more productive work arrangements and lower costs (ibid). This is the single mention of any kind of effect that work arrangements may have on co-worker relations. Recent research suggests that work arrangement has effects on work attitudes and behaviors, but the literature has not fully examined the role uncertainty plays for particular work arrangements on the quality of co-worker relations and work arrangements.

## Data and Methods

### *Sample*

The current analysis relies on a sub-sampled portion of the 2002 Biennial General Social Survey (GSS) module related to the quality of work life and employment ( $N = 1303$ ). The GSS samples from the entire U.S. population, those included in my sample are only those respondents who are employed full-time and have a supervisor. I was most interested in those workers who regard themselves as full-time workers, as they are more likely to be engaged in myriad relationships with co-workers. Also, as supervisors are representative of a particular kind of co-worker, I am only interested in those who have supervisors. That relationship is also important to understanding the overall embeddedness of the individual worker. In-person interviews ( $N = 2,765$ ) were performed using a national, full probability sample of English-speaking persons 18 years of age and older during February, March, and April of 2002. This survey had a 70% response rate. The subsample used here is 48% female. Racially and ethnically, the

subsample is 77.8% white, 15.7% African American, 3% Hispanic, and 3.5% other ethnic minority respondents.

### *Dependent Variables*

For this study, co-worker relations are the dependent variable. Here, it is conceptualized as the ways in which work relationships are encouraged, formed, or cultivated, and discouraged, dissolved, or institutionally denied through the social interactions occurring within the workplace, and the ways in which interactions between the individual and their co-workers are interpreted by the individual. This concept was operationalized using eight different questions and data from the 2002 version of the GSS including the respondent's attitudes regarding their relationship with their supervisor (supervisor relationship), respect at work (respect), feeling threatened on the job in the last 12 months (threatened), trust in management (trust), relationship with management (management), if they would talk directly to a co-worker who was not working (directly), if they would talk to a supervisor about a not working co-worker (supervisor), and if they would do nothing about the not working co-worker (nothing). The actual measures are given in the appendix. These measures were chosen because they each describe different aspects of the kinds of relationships individuals workers may have in their workplace—those with coworkers, managers, and supervisors. They also describe the ways in which workers relate to others in their workplace, that is, they describe different kinds of co-worker relations.

### *Independent Variables*

The primary independent variable is participants' self-report of their work arrangement style—the different ways in which the respondent could do their work. Originally, I tested five variables as a measure of work arrangement: whether the individual has a job other than their main job, the shift they work at their main job (day, night, split, irregular, or rotating), the work they did (regular/permanent, independent contractor/consultant/freelance, on-call/temp agency, or work for a contractor), if the individual worked as part of a team, how often they take part in work decisions, and how often they set the way things are done. After these preliminary analyses, I found that only the frequency of decision-making (decisions) and the frequency of setting the way their work is done (setting things) to be the only variables with statistically significant correlations with the dependent variable. Thus, these two variables were chosen as measures to represent the work arrangement for an individual: how often they made decisions about their own work and how often they decided how their work would be done. The other variables proved to have less predictive power despite an intuitive sense that they might better operationalize different work arrangements. *Hypothesis 1:* Work arrangements that afford individuals more autonomy through increased decision-making and ability to determine how work is done will encourage negative co-worker relations.

*Control variables.* To isolate the effects of work arrangements on co-worker relations, I included several individual-level variables to control for demographic and other possible differences. To rule out possible effects that other variables may have on the responses individuals gave, the following control variables were included in my analyses: sex, age, race, political party identification, marital status, income, subjective

class identification, union membership, whether the individual considers themselves self-employed, highest degree achieved, and their occupational prestige score. Further, I included six occupational categories, as coded by the 1980 U.S. Census, as other possible control variables including managerial and professional specialties, technical/sales/administrative, services, farm/forest/fishing, precision/production, and operator/fabricator/laborer occupations.

*Intervening variables.* As stated earlier, my analysis involves more than using work arrangements to explain co-worker relations. I also analyzed the impact that uncertainty and work attitudes may have on the relationship that exists between work arrangements and co-worker relations. I will briefly describe the conceptualization and operationalize of each of these concepts.

*The uncertainty hypothesis.* In order to measure the effect that workplace uncertainty, as an intervening variable on the relationship between work arrangements and co-worker relations, I chose variables that indicate different kinds of uncertainty. Uncertainty means any kind of doubt or ambiguity resulting from one's job, particular position within a given firm or organization, or from the variant ways one's employment is contracted. The GSS included whether the individual has been laid off from their main job in the last year, if the individual knows what is expected of them on their job, if their workplace runs in a smooth manner, if the job security is good, if the individual's chances for promotion are good, and if promotions are handled fairly. During the initial analysis of this hypothesis, I found that only whether or not the individual felt their workplace ran smoothly (smooth) and whether or not promotions were handled fairly to be the best measures of uncertainty (fair). These two variables are included in the

analysis discussed in the results section. *Hypothesis 2:* Those workers who experience workplace uncertainty in a workplace that is not run smoothly and promotions are handled unfairly will report negative co-worker relations.

*The work attitudes hypothesis.* Work attitudes are those thoughts and feelings the individual has about their workplace and their position within it. As conceptualized, it does not include those thoughts and feelings related to co-workers; that has been left to the co-worker relations concept. Work attitudes were measured using the following variables: their job allows the individual to use their skills, work conditions allow for productivity, the individual has a lot of freedom to decide how to their job, the individual has training opportunities, there is enough help and equipment to get the job done, there is enough information to get the job done, the likelihood of the individual making an effort to find a new job within the next year, that the individual runs out of time before getting things done at work, there is an opportunity to develop their abilities, how generally satisfied they are with their job, how proud they are to work for their particular employer, and if their job is rarely stressful. Of this set of variables, every one was ruled out during the primary analysis as a possible explanation of the relationship between work arrangement and co-worker relations despite what Broschak et al (2008) found. Thus, the work attitudes hypothesis was not further analyzed in the regression models described here. *Hypothesis 3:* Those workers who experience more negative work attitudes will report more negative co-worker relations.



## Results

### *Model specification*

The following diagram is a graphical expression of the conceptual relationship I am proposing exists between work arrangements and co-worker relations.

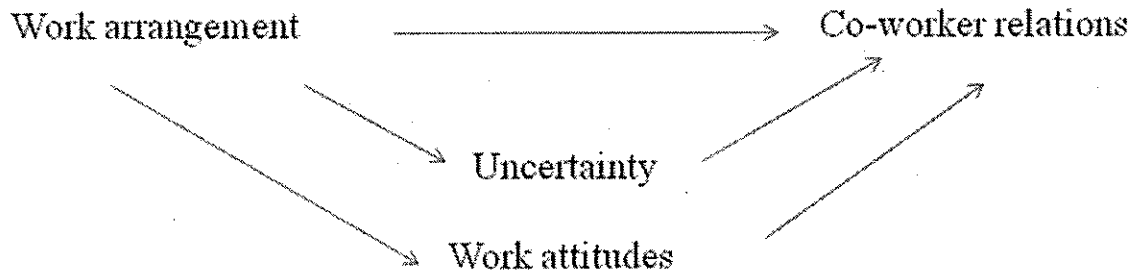


Table 1 reports descriptive statistics and the code range for each variable. The results of the regressions predicting work co-worker relations with work arrangements and work arrangement combined with uncertainty are presented in Tables 2 and 3, respectively. Ordinary least squares regression analysis was used to estimate all models, except whether or not the respondent had been attacked on the job in the last 12 months, which was estimated using binomial logistic regression.

Some support was found for the relationship between co-worker relations and work arrangements. Table 2 includes the results for the eight models. All the models include the two variables conceptualized as work arrangements (decisions and setting things). In support of Hypothesis 1 that predicted that work arrangements that promote autonomy would have negative effects on co-worker relations, I found that when a workplace arrangement encourages worker autonomy. This happens through increased individual ability to make decisions and set the way their work is done. Further, work arrangements are a significant predictor for negative supervisor relationship, lower reports of respect, and lower trust. Work arrangements also have a significant positive

effect for directly, supervisor, and nothing. For the management relationship variable (model 5), we see that only when the individual sets the way things are done as being a significant predictor of lower positive relations with management. Neither of the work arrangement variables were significant predictors of threatened.

While the work attitudes hypothesis was not supported, I did find some support for the uncertainty hypothesis, that those individuals who report more autonomous work arrangements will also report workplace uncertainty as negatively affecting co-worker relations. When the two uncertainty variables, a smooth-running workplace and a feeling of fairness when promotions are handled, were added to the aforementioned models in Table 2, I found that the associations that exist between work arrangement and co-worker relations are affected by the workplace uncertainty experienced by the individual. The results in Table 3 show that increased feelings of a smooth workplace and fairly handled promotions produce significant effects for the work arrangement effects on negative supervisor relationships, lower feelings of respect, increased likelihood of being threatened, lower feelings of trust in management and higher levels of negative management. Only feelings of fair promotions significantly predict lower likelihood of talking directly to a not working co-worker. Neither uncertainty variable had a significant effect on the likelihoods of supervisor or nothing.

## Discussion

The results indicate that two of the three hypotheses were supported—that work arrangements affect co-worker relations and that uncertainty acts as an intervening variable in the relationship between arrangements and relations. The work attitudes

hypothesis was not supported by these data. In this section I will discuss the three hypotheses and summarize the evidence or lack thereof in relation to each hypothesis. I will now address the first hypothesis regarding work arrangements and co-worker relations.

The analysis shows that work arrangements that allow for workers to make their own decisions and to set the way their work is done have lower ratings on the co-worker relation variables—that a work arrangement that encourages individual autonomy also promotes fewer positive interactions with co-workers, supervisors, and management. I found that there are significant effects for work arrangements on the kinds of relations workers have in their workplace. This is consistent with the theory that suggests that managerial control styles affect the ways workers engage with their work and with each other. The negative relations that result from more autonomous work arrangements should be a signal to managers and supervisors that their workers are less inclined to have positive working relations with each other. This could be because of lower production and less efficiency. To create a positive workplace, one that encourages co-workers to form solid working relationships, managers and supervisors should strive for a balance between team-centered and individual autonomous work arrangements. I will now turn to the uncertainty hypothesis and its effect on work arrangement and co-worker relations.

Of the two intervening variable hypotheses, the analysis showed support only for the uncertainty hypothesis. The analysis suggests that work arrangements that have low levels of uncertainty in regards to how smooth the workplace is run and workers who feel promotions are handled fairly while also having high levels of workplace autonomy will breed more positive co-worker relations. While the first hypothesis test showed that

autonomous work arrangements have a generally negative effect on co-worker relations, the uncertainty hypothesis presents a more positive story. We can reduce the negative effects autonomy has on relations by reducing the uncertainty workers experience. Managers and supervisors also have control over their workers' sense of uncertainty. While many companies and offices may not operate particularly smoothly, if the worker at least has a sense of things running smoothly they are more likely to have more positive relations. Further, knowing how fairly promotions are handled can also reduce the negative effect of autonomy. Workers must have a clear sense of how their workplace operates. If more uncertainty is experienced, we can surmise that workers will be less clear about their jobs and perhaps more likely to have trouble maintaining steady work flows and positive outputs. Both of these two hypotheses were supported through the analyses conducted. However, the work attitudes hypothesis was not supported. I will now address the evidence and explain why this occurred.

The work attitudes hypothesis was not supported by the initial analysis and was not included in the final models. No significant predictors of co-worker relations emerged during these regressions. The literature implies that work attitudes might influence the kinds of co-worker relations that exist in the workplace. However, these data do not indicate attitudes having a significant intervening effect on the relationship that exists between work arrangements and relations. Intuitively it makes sense that a worker's feelings toward their job and their workplace would have an effect on how they interact with co-workers, managers, and supervisors. However, the data show us that the effect of work arrangements on co-worker relations is so strong that it is not affected by work

attitudes. While they are important in understanding the worker's experience, they are not important here in helping elucidate this phenomenon.

### Conclusion

As changes in varying work arrangements increase with the demand for more profit and lower costs, the study of co-worker relations is an important aspect of the workplace that we do not presently fully understand. Co-worker relations are important because they can be used as an indicator of how connected workers are to each other and their jobs. Better co-worker relations can mean higher quality and more efficient production for managers. They can also indicate more satisfying workplaces that encourage more positive interacting between co-workers over isolating autonomy. This study has shown that both particular work arrangements and workplace uncertainty affect co-worker relations negatively.

From an organizational perspective, workers who have more positive co-worker relations are more congenial in the workplace. This can aid in better quality work and cost less because jobs that people enjoy coming to may be seen as reward themselves, which can reduce the cost of benefits and perks (Florida 2002). They may be more likely to seek help from others when problems arise and look to one another to keep morale and motivation high to work on and complete projects. Positive co-worker relations may also help to prevent problems because individuals would be more likely to talk to not working co-workers as friends rather than mere workplace acquaintances, helping to reduce stress and setbacks that can come from extended bouts of co-worker emotion management. Second, for individual employees and workers, more positive co-worker relations would

aid in the reinterpretation of something like workplace uncertainty. Rather than experiencing work as an autonomous and isolating place in which goals are unclear and work is difficult to make sense of, an arrangement that promotes in person co-worker interaction might help make things clearer or at least more bearable. Third, for sociologists of work, this study directs us toward a new ways of thinking about the effect work arrangements have for the workplace as a group of people, rather than examining the individualized effects we often look at when studying different work arrangements. I will now address possible problems associated with this study and suggest ways in which it can be improved.

Can we answer all our questions about the 21<sup>st</sup> century workplace by simply examining non-standard versus standard work arrangements? That we only have those which emphasize autonomy and those that do not? This research suggests that we need to know more about the kinds of work arrangements that today's organizations and firms employ. If the 1990s saw an increase in contractual and contingent-style labor arrangements, what kind of arrangements exist in the 2000s? And how do today's organizations exist? Is it as a mix of autonomous and team-related work? Is it one more than the other? What does it look like? We must do more work within organizations now, rather than examining them retroactively as other researchers have done. If we are able to gain deeper insights and understandings as to how work arrangements operate and what kinds of effects they have for both organizations and workers as they are presently, we can help make better organizations and better working conditions right now rather than later. This is one set of questions that future researchers should answer. These different work arrangements, by their very nature as exhibited in this project, produce co-worker

relations that reflect the work in which that firm engages. I will now address future research questions related to co-worker relations.

If you were to take a look at the current literature, there is little that directly takes on the ways in which different workers become embedded in relationships in their workplace through the way their work is arranged (Korcynski 2007). While many have perhaps made attempts at understanding the ways relationships are formed and are subsequently affected by the work arrangements in a firm, work arrangements have not been directly addressed in terms of the relations between workers at all levels in an organization. This project focuses on the relationships the worker has with their supervisor, their manager, and other co-workers. It only analyses those who have supervisors, which excludes those who themselves are supervisors. Future research needs to focus on the relations that exist between all levels in the workplace hierarchy, as well as those relations that exist in more horizontally-arranged organizations. That is we need to study entire organizational cultures, rather than segmented portions. Sociologists choose to analyze society as a whole, looking at the varying relationships and the ways in which interaction affects and is affected by different contexts. However, sociologists of the work place have tended to examine relationships within particular groups in organizations rather than the organization as a whole. To look at organizations in an all-encompassing way, rather than dissecting it into managers versus workers, and vice versa, as we have done, we should instead analyze the way all those co-worker relations intermix and affect each other. Work arrangements are one way that helps these relationships either form, dissolve, or never form in the first place. However, there are other organizational factors that are affecting the way workers interact with one another

and get their work done. While there will always be things that have not yet been thought of or considered when projects are created and carried out, every project has its own unique set of issues that prevent it from most completely and fully answering its question and describing its answer. I will now briefly discuss the limitations of this study.

First, the GSS data I used for this study was collected in 2002. The analysis was completed in the spring of 2008, six years after the data was initially collected. For better accuracy when drawing conclusions about the 21<sup>st</sup> century organization, it would have been better to use more recent data. While the data is not old enough to be ruled obsolete by more recent surveys, its use here does call into question if we might have seen different results had newer data been used. Might the results have been different, with work arrangements and uncertainty having different effects on co-worker relations than those seen here, had been analyzed? We will not know here. The post-9/11 economy, the War on Terrorism, and the impending energy crisis could all have effects on workers not reflected in the 2002 GSS. However, future researchers may want to use more recent GSS datasets to conduct the same analyses and see if the same results occur, or if they have changed over time.

Second, there are problems that emerge because of the use of secondary data. The results here assume correct classifications of the individuals included in the analyses—that they have supervisors and that they are currently employed. There is no way to guarantee that these results are completely accurate because I did not write the questions—the intention and motivation behind GSS researchers may be different than my own, perhaps causing some respondents to be wrongly included or others who have been excluded. The conceptual constructs I created using GSS variables may not



accurately capture the concepts I am aiming to analyze because they exist as someone else's questions. If I had used primary data sources such as interviews or surveys I designed and collected myself, concepts constructed from these data may yield different results.

Third, the analyses here are limited to only those individuals who are working and have supervisors and do not consider those who may themselves be supervisors, or who might otherwise be employed but were not when the surveys were conducted. Had these individuals been included, I believe the evidence of a negative impact of work arrangements on co-worker relations would be stronger. For reasons unknown to me, these individuals were out of work or without supervisors at the time of data collection. However, if they had been included we might learn more about the full picture of supervisor/manager-employee relations as well as those between employees because more data would have been included. This is problematic because it does not fully portray the possibilities of the effects of work arrangements on co-worker relations. They may exist differently for different members of an organization or firm. This study used only those who have supervisors because one of the CWR variables asked if the individual would report to their supervisor about a non-working co-worker. If the individual did not have a supervisor, this question was rendered irrelevant. However, I felt it necessary to measure the ways in which people relate to each other within their organization, and this includes the likelihood of reporting a co-worker to a supervisor. However, this is simply one possibility. Many others exist and were not used due to a lack of GSS data or because the literature did not direct me to use them.

Finally, the use of quantitative methods is problematic. I will not engage in a qualitative versus quantitative analysis discussion here, but I will acknowledge that statistical methods do present particular issues that other methods do not. For this study, we do not get a full description of organizationally arranged autonomy and possibly isolation that produce negative co-worker relations and possibly low feelings of regard for their work and/or organization. This kind of description might help us to more completely understand the effects that arranged autonomy has for workers as well as what kind of effect it has beyond co-worker relations. We also are without explanations for why people might feel negatively about their co-workers, supervisors, and managers. I believe it is because of their work arrangements and simultaneous uncertainty. This relationship may exist statistically, but may be a giant leap of inference rather than one indicative of actual social life. However, if we are to believe the tenets of statistical inference, we can assume that work arrangements and uncertainty can predict co-worker relations. If I had qualitative data to match the analyses presented here, I could describe a much more complete picture of co-worker relations. While this does exist as a limitation of this study, I also would suggest that qualitative data be collected to further analyze these relationships.

These results do suggest that co-worker relations are affected by work arrangements and uncertainty experienced in the workplace. Future research would help confirm these results, as well as expand on other possible variables that may affect those relations. A more complete understanding would benefit the sociology of work, as well as organizations themselves who may have members seeking to understand why they find workers experiencing negative work-lives. Because other questions of co-worker

relations and work arrangements have not yet been asked, we must further examine why this relationship exists and what other implications it has for the modern workplace. This study is the first step of hopefully many that will help us to prevent isolated workers and negative work environments that the literature would have us believe to be on the increase in the 21<sup>st</sup> century.

Table 1

Variable	<i>n</i>	<i>m</i>	<i>SD</i>	Code Range
How often R takes part in decisions	1303	1.81	0.89	1--4 (4 = often)
How often R sets way things are done	1303	1.77	0.871	1--4 (4 = often)
Workplace runs in a smooth manner	1301	2.14	0.774	1--4 (4 = strongly agree)
Promotions are handled fairly	1249	2.18	1.015	1--4 (4 = very true)
Supervisor helpful to R in getting job done	1290	3.26	0.883	1--4 (4 = very true)
R threatened on the job in last 12 months	1302	3.12	0.328	0--1 (1 = yes)
R treated with respect at work	1302	3.28	0.667	1--4 (4 = strongly agree)
R trust management at work	1297	2.95	0.844	1--4 (4 = strongly agree)
Relations between management and employees	1301	3.02	0.955	1--5 (5 = very good)
How likely to talk directly if co-worker not working	1298	2.57	1.168	1--4 (4 = very likely)
How likely to speak to supervisor if co-worker not working	1303	2.36	1.128	1--4 (4 = very likely)
How likely to do nothing if coworker not working	1300	2.29	1.188	1--4 (4 = very likely)
Age	1297	39.92	11.828	18-82
Married	1303	0.46	0.499	0--1
Log of Income	1232	2.706	0.519	0--4.58
Class ID	1301	2.46	0.596	1--4
Union member	1303	0.09	0.291	0--1
Self-employed or works for somebody else	1303	1.93	0.251	1--2
Occupational prestige score	1293	45.71	13.829	17-86

Table 2  
Results of Regression Analysis  
For Co-Worker Relations  
Outcomes

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8								
	Supervisor relationship	Respected at work	Threatened on the job	Trust of Management	Management Relationship	Talk to not workin g co- worker	Talk to supervisor about not- working co- worker	Do nothing about not- working co- worker								
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE								
intercept	***3.507	0.325	***3.473	0.237	-0.437	1.28	***3.825	0.303	***4.467	0.354	***3.336	0.413	***3.607	0.418	***1.226	0.432
-low often R	***-0.154	0.036	***-0.114	0.026	0.129	0.132	***-0.144	0.034	-0.031	0.04	**-0.18	0.046	*-0.118	0.047	**0.135	0.048
takes part in decisions	***-0.174	0.037	***-0.132	0.027	0.099	0.099	***-0.139	0.035	***-0.16	0.041	**-0.22	0.048	**-0.133	0.048	***0.228	0.05
sees way things are done	0.003	0.002	**0.004	0.002	-0.008	0.008	*0.004	0.002	-0.001	0.002	-0	0.003	-0.004	0.003	0.002	0.003
Age	0.083	0.072	0.091	0.053	-0.318	0.601	0.012	0.069	0.076	0.08	-0.01	0.083	-0.025	0.094	-0.078	0.097
Black	0.092	0.146	0.039	0.108	-1.01	0.922	0.083	0.139	*0.357	0.162	-0.26	0.189	0.024	0.191	0.071	0.197
Hispanic	-0.189	0.142	*-0.249	0.105	-0.237	0.261	-0.042	0.135	-0.093	0.157	-0.04	0.186	0.022	0.186	0.217	0.194
Other ethnic minority	*0.116	0.058	0.022	0.043	-0.237	0.261	0.053	0.055	0.089	0.064	0.111	0.075	-0.042	0.076	0.013	0.079
Republican	0.075	0.067	0.086	0.05	0.051	0.064	0.051	0.064	0.095	0.074	**0.212	0.067	-0.027	0.088	-0.036	0.091
Independent	-0.026	0.051	0.033	0.038	-0.035	0.187	0.082	0.048	0.046	0.056	0.064	0.066	0.037	0.065	-0.104	0.069
Married	-0.082	0.051	0.02	0.037	0.379	0.213	0	0.048	-0.108	0.056	**0.156	0.066	0.04	0.066	-0.105	0.069
Log of Income	0.032	0.046	0.041	0.037	-0.056	0.17	0.013	0.043	0.026	0.05	-0.01	0.059	0.059	0.059	-0.057	0.061
Subjective class identification	0.075	0.078	0.063	0.057	-0.013	0.074	-0.013	0.074	-0.005	0.086	*-0.214	0.1	**0.271	0.101	0.189	0.105
Technical/sales/	-0.084	0.104	-0.071	0.076	1.24	0.392	-0.045	0.098	-0.157	0.114	*0.269	0.134	-0.163	0.135	-0.062	0.14
admin occupations	0.258	0.255	0.16	0.19	-18.5	11021	0.302	0.243	-0.368	0.284	0.058	0.331	-0.276	0.335	0.009	0.346
Service occupations	0.021	0.101	-0.045	0.075	-0.107	0.474	-0.072	0.095	-0.144	0.111	*0.275	0.13	-0.217	0.132	-0.069	0.136
Farm/forest/fishing occupations	0.179	0.112	-0.089	0.083	0.051	0.381	-0.051	0.106	*-0.258	0.124	-0.12	0.145	**0.437	0.146	0.265	0.151
Precision/production occupations	-0.008	0.027	0.033	0.02	-0.025	0.099	0.02	0.026	0.007	0.03	**0.14	0.035	*-0.119	0.035	*0.121	0.036
Operators/fabricators/ laborer occupations	-0.07	0.084	-0.087	0.062	0.497	0.279	**0.25	0.079	-0.206	0.093	-0.14	0.108	-0.231	0.109	0.105	0.113
R's highest degree	0.125	0.104	-0.077	0.074	-0.034	0.381	***-0.345	0.095	**0.313	0.11	-0.21	0.129	-0.186	0.13	0.182	0.135
Union member	0.001	0.003	0	0.002	0.017	0.01	0.001	0.003	-0.006	0.003	0	0.004	**0.003	0.004	0.004	0.004
Self-employed or works for somebody else	0.08	0.115	0.115	0.102	1214	1213	0.102	0.102	0.041	0.041	0.127	0.127	0.044	0.044	0.076	0.076
Occupational prestige score	1203	1214	1214	1213	1213	1213	1213	1213	1213	1213	1210	1210	1213	1213	1212	1212
Adjusted R-squared	***6.25	***8.88	Model Chi-sq:	**43.64	***7.909	***3.605	***9.796	***3.764	***5.957							

\* p < .05. \*\* p < .01. \*\*\* p < .001.

Table 3  
Results of Regression Analysis  
for Co-worker Relation-  
inc. Uncertainty Outcomes

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	Supervisor relationship	Respected at work	Threatened on the job	Trust of Management	Management Relationship	Talk to not workin g co- worker	Talk to supervisor about not- working co-worker	Do nothing about not- working co- worker
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	***4.078	0.304	-5.391	1.341	***5.047	0.347	***3.604	***1.157
How often R takes part in decisions	*-0.079	0.034	0.057	0.138	0.034	0.039	*-0.102	**0.12
How often R says way things are done	**0.094	0.035	-0.032	0.141	***-0.106	0.04	**0.132	***0.223
Workplace runs in a smooth manner	***-0.272	0.033	0.372	0.131	***-0.295	0.038	-0.009	0.029
Promotions are handled fairly	***-0.246	0.025	0.019	0.293	***-0.178	0.029	-0.06	0.052
Age	0.003	0.002	-0.005	0.009	-0.002	0.002	-0.002	0
Black	0.073	0.066	0.05	-0.32	0.072	0.076	-0.027	-0.073
Hispanic	0.093	0.132	0.031	0.511	**0.367	0.152	0.023	0.078
Other ethnic minority	-0.185	0.129	-1.075	0.941	-0.086	0.148	0.191	0.197
Republican	0.05	0.054	-0.228	0.266	0.044	0.162	0.025	0.232
Independent	0.031	0.062	0.047	0.051	0.071	0.071	-0.049	0.077
Married	-0.041	0.047	-0.024	0.194	0.029	0.054	0.068	-0.071
Log of income	-0.086	0.049	0.378	0.23	-0.088	0.056	0.059	0.07
Subjective class identification	-0.009	0.042	0.01	-0.028	-0.023	0.048	0.063	-0.043
Technical/sales/ admin occupations	0.111	0.072	0.054	0.021	0.003	0.082	*-0.25	0.103
Service occupations	0.024	0.095	1.301	0.409	-0.104	0.109	-0.111	0.137
Farm/forestry/fishing occupations	*0.472	0.233	-18.707	10.721	-0.19	0.267	-0.229	0.336
Precision/production occupations	0.116	0.093	-0.1	0.489	-0.087	0.106	-0.175	0.134
Operators/fabricators/ laborer occupations	*0.232	0.103	0.077	0.013	-0.207	0.118	**0.398	0.148
R's highest degree	-0.003	0.025	0.019	0.013	0.006	0.029	***-0.136	0.036
Union member	0	0.077	0.058	-0.181	-0.153	0.088	*-0.229	0.111
Self-employed or works for somebody else	*0.269	0.097	-0.242	0.392	-0.196	0.11	-0.208	0.138
Occupational prestige score	0.002	0.003	0.017	0.004	-0.003	0.003	-0.001	0.004
Adjusted R-squared	0.249	0.265	0.017	0.443	0.156	0.141	0.05	0.08
Number of observations	1161	1166	1024	1164	1166	1163	1167	1166
Model F value	***18.448	***20.079	Model Chi-squared: ***68.658	***43.036	***10.799	***9.695	***3.775	***5.609

\* p < .05. \*\* p < .01. \*\*\* p < .001.

## Appendix

### *Work arrangement*

How often R take part in decisions: Often, sometimes, Rarely, Never; reverse coded.

How often R set way things done: Often, sometimes, Rarely, Never; reverse coded.

### *Uncertainty*

Workplace runs in smooth manner: Strongly agree; agree; disagree; strongly disagree; reverse coded.

Promotions are handled fairly: Strongly agree; agree; disagree; strongly disagree; reverse coded.

### *Co-worker relations*

Supervisor helpful to R in getting job done: Very true, somewhat true, not too true, not at all true; reverse coded.

R threatened on the job last 12 months: Yes, no.

R treated with respect at work: Strongly agree; agree; disagree; strongly disagree; reverse coded.

R trust management at work: Strongly agree; agree; disagree; strongly disagree; reverse coded.

Relations between management and employees: Very good, quite good, neither good nor bad, quite bad, very bad; reverse coded.

How likely to talk directly if coworker not working: Not at all likely, not very likely, somewhat likely, very likely.

How likely to speak supervisor if coworker not working: Not at all likely, not very likely, somewhat likely, very likely.

How likely to do nothing if coworker not working: Not at all likely, not very likely, somewhat likely, very likely.

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