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Autonomy and coordination: a field study

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Abstract

With an emerging remote and dispersed workforce that is consequently more autonomous, OD professionals will need to understand how autonomy relates to coordination to help organizations adapt and be effective. The purpose of this study was to understand the relationship between team member autonomy and inter-team coordination in organizations. The manager-team participants in this study spanned eleven industries, including 22 teams from 15 companies. The researcher took a mixed-method approach using interviews and surveys to assess autonomy and coordination. The research resulted in five variables: three variables measured coordination and two variables measured autonomy. Autonomy and coordination were significantly and positively correlated in one case. The other correlations were not significantly and positively correlated. The correlation implies that teams with a high percentage of independent work time and that spend little time being actively managed by their managers also coordinate on a higher volume of collaborative projects with other teams.

Keywords: autonomy, coordination

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Chapter 1

Introduction

In January 2020, Jane was living in Chicago, working in the city, and spending her free time with friends. She lived thousands of miles from her parent's home in New Mexico. A few months later in April, her office in Chicago shut down due to concern over the coronavirus and announced everyone would be working remotely for a few weeks. Jane went back to New Mexico to visit with her parents and take advantage of the rare remote work opportunity. A few weeks turned into a couple of years, during which time Jane's parents relocated to Oregon and she followed them. The world continued to change as it adapted to the frequently shifting demands of the coronavirus pandemic. In 2022, Jane's company announced they were going to bring employees back to the office, but Jane had already fallen in love with Oregon and started a new life there. She explained her situation to her manager. Her company approved her to stay permanently as a remote worker, no longer such a rarity. Much of the rest of her company returned to a hybrid way of working.

The hypothetical case above reflects the current reality. For example, in October 2020, a survey of 5,889 US adults working full or part time found that 71% of workers who said they had jobs that could be done from home were working from home all or most of the time (Parker et al., 2022). In February 2022, the same survey reported 59% of those workers were working from home all or most of the time. The survey concluded, at both points during the pandemic, there were significantly more employees teleworking than the 23% who said they were frequently teleworking prior to the pandemic and 57% who said they never worked at home prior to the pandemic. The acceleration of remote workers brought on by the simultaneous variables of the pandemic and technological

advancement required reframing of work (Laker, 2023). Without knowledge and expertise, managers are unprepared for the complexities of coordination amongst dispersed teams (Smite et al., 2008). Leaders are faced with a challenge to connect the dots between functions and geographies in increasingly dispersed environments (Laker, 2023). Even prior to the pandemic, technological advances had begun to allow globalized companies to depend on an increasingly dispersed workforce utilizing new processes, structures, and communications (Montoya-Weiss et al., 2001). Workers and leaders dispersed and asynchronously working in autonomous physical work environments are being challenged to connect and coordinate in more complex organizations than ever before.

Globalized and dispersed companies, remote and hybrid work, and teams connected via technology require more autonomy than co-located work at localized companies, yet organizations still need to stay connected. How do autonomy and coordination coexist? Autonomy in the workplace can improve employee well-being, satisfaction, and interest. Slemp et al. (2018) found that "autonomy support" as a leadership approach lends to self-determination and optimal functioning. Kwok (2020) discussed intrinsic and internal values of autonomy, pointing to skill development, job satisfaction, and psychological well-being as benefits. They also highlighted "bridging functions" of organizations, such as cultivating connections and building civic skills of cooperation, to be more effective when a workplace treats workers as autonomous agents. Gardell (1977) determined that designing jobs that allow for high autonomy and placing a high demand on skill and cooperation favors worker interest in company affairs. Remote work requires innate autonomy. Autonomy has been shown to increase the effectiveness of cooperation and engagement (Kwok, 2020; Gardell, 1977; Slemp et al., 2018).

With a continually shifting remote and globalized workforce, units within organizations will need to stay coordinated while aligning to the autonomous work environment. Can organizations provide more autonomy to workers while still maintaining the coordination that is inherent to an organization? The purpose of this study was to understand the relationship between team member autonomy and inter-team coordination in organizations. The discussion of autonomy and coordination has become more significant due to the changing ways of working but has been ever present in organizations. This study does not specifically address autonomy and inter-team coordination in a virtual environment to keep the conclusions generalizable to hybrid and in-office settings as well. At this stage in the research, "autonomy" will be defined generally as the freedom of one's thoughts and actions. "Coordination" will be generally defined as the act of bringing the different elements of a complex activity or organization into a relationship that ensures efficiency and harmony.

Organization development ("OD") professionals must prepare to help organizations lean into the emerging demands of the remote workforce. OD professionals will need to understand how autonomy relates to coordination to help organizations use the realities of work to be effective. Leaning into job autonomy may keep organizations connected, coordinated, and effective.

Purpose

The purpose of this study is to understand the relationship between team member autonomy and inter-team coordination in organizations. It sought to understand how autonomy—as a job characteristic—and inter-team coordination in an organization were related.

This mixed-method, cross-sectional study attempted to answer the question: what is the relationship between autonomy and inter-team coordination in organizations?

Research Setting

Twenty-two teams across eleven industries were the subject of this study. The Job Characteristics Inventory was used to determine the autonomy of individual team members (Sims et al., 1976). Interviews were conducted with managers of each team to determine the manager's perception of the level of coordination between their team and other teams in the organization. The relationship between individual team member autonomy and inter-team coordination was analyzed to determine correlation.

Significance of the Study

There is a significant body of research to understand the effect of autonomy on prosocial or cooperative behaviors (Beaty et al., 2001; Kwok, 2020; Lopes et al., 2014; Niehoff & Moorman, 1993; Van Scotter & Van Scotter, 2021). The coronavirus pandemic launched organizations into a remote and hybrid workforce. Globalized companies continue to benefit from a dispersed workforce and technological advancements. More autonomous jobs are increasing as remote and hybrid workers spend more time on their own. For organizations to be effective, they must stay connected. The specific relationship between team member autonomy and inter-team coordination has yet to be studied. This study provides some initial data to establish a relationship between the two variables. Companies could use the data to understand how job design and coordination between teams is related so that they may be effective with an increasingly autonomous workforce.

Thesis Outline

This chapter outlined the background, purpose, research setting, and significance of the study. Chapter 2 reviews the relevant research on the benefits of autonomy as a job characteristic and prior research on the relationship between autonomy and coordination in organizations. Chapter 3 outlines the methods used in the study. Chapter 4 reports the study results. Chapter 5 provides a discussion of the findings.

Chapter 2

Literature Review

The purpose of this chapter is to review the relevant research on the benefits of autonomy as a job characteristic as well as prior research on the relationship between autonomy and coordination behaviors in organizations. It presents research done on the significance of autonomy to the individual in their job. Specifically, the SCARF model (Rock, 2008), the Leader Autonomy Support framework (Slemp et al., 2018), and Job Characteristics Theory (Hackman & Oldham, 1976). Measures of autonomy established in prior research are reviewed for use in this study. The benefits of autonomy which extend beyond the individual to the social environment are discussed. Research that connects coordination to social behaviors in organizations, and autonomy to the social environment is reviewed. This includes contextual performance in the Job Design Model, Organization Citizenship Behaviors, and the role of autonomy in intrinsic motivation and its effectiveness compared to extrinsic motivation. Considering the benefits of autonomy on the social environment of the organization, this review will acknowledge the uniqueness of organizations and the types of autonomy that organizations can tolerate.

Autonomy Benefits the Individual Employee

Worker autonomy has been a consistent focus in job design research (Hackman & Oldham, 1976; Oldham & Fried, 2016; Rock, 2008; Slemp et al., 2018; Turner & Lawrence, 1965). Evidence suggests four core dimensions—variety, task identity, autonomy, and feedback—positively affect employee attitude and behavior at work (Hackman & Lawler, 1971). Hackman and Lawler (1971) found employees experience greater job satisfaction and experience personal involvement in their work when jobs are high on the four dimensions. They specified that autonomy taps the degree to which

workers feel personal responsibility for their work and leads to more fulfillment and satisfaction. This finding is particularly strong for employees with higher order need satisfaction, that is, a need for independence, worthwhile accomplishment, personal growth and development, and self-esteem or self-respect. Later, the Job Characteristics Model/Theory again defined autonomy as one of five key job characteristics (Hackman & Oldham, 1976). These five characteristics create the psychological states for individuals with certain attributes to become internally motivated to perform effectively at work.

Rock (2008) includes autonomy as one of five domains of human social experience involved in his psychological safety model, which addresses status, certainty, autonomy, relatedness, and fairness (SCARF Model). He found the domains of the model capture common factors that affect a neurological reward or threat response in social situations, specifically in the workplace. Rock shows how autonomy creates a sense of control. To support job design, creating autonomy for workers has also been studied in terms of leadership style, coined Leader Autonomy Support (Slemp et al., 2018). Kwok (2020) argued there is a polarization of work autonomy between low and highly skilled workers. He says if highly skilled workers did not value autonomy, then they would not seek it out as part of their jobs. Findings of autonomy in the workplace show it is an important factor contributing to job satisfaction, intrinsic motivation, and positive response to work (Hackman & Oldham, 1976; Oldham & Fried, 2016; Rock, 2008; Slemp et al., 2018; Turner & Lawrence, 1965).

Measures of Autonomy

The management literature establishes multiple measures for autonomy. Thus, the knowledge base has a need for multi-dimensional framework encompassing types and levels of autonomy (Lumpkin et al., 2009). Lumpkin et al. (2009) developed a measure of

autonomy at the firm-level specific to addressing entrepreneurial organizations. In doing so, they reviewed autonomy scales already available in the literature. They call for future research on the differences in autonomy for various business types (e.g., large, and small organizations). Sims et al. (1976) researched an improved job characteristics instrument to study the reliability and validity of the tool for research on job characteristics. Their instrument, called the Job Characteristics Inventory, measures autonomy and other job dimensions. The results of Sims et al.'s (1976) study as well as those of subsequent studies provide promise for the use of measuring autonomy for diagnostic and research purposes.

Benefits of Autonomy Extend Beyond the Individual to the Social Environment

Lopes et al. (2014) hypothesized that the implications of autonomy would extend beyond the individual via the worker's engagement in their social environment. They argued that autonomous behavior would influence pro-social behavior by creating self-esteem, personal growth, and well-being. Autonomy teaches the individual to self-govern, which fosters pro-social behaviors. Kwok (2020) explored the body of related research on work autonomy as a social good and extrapolated the reasons work autonomy might lead to civic participation. Civic participation is a facet of social goods defined by cooperative disposition, coordination efforts, conflict resolution skill, and confidence in political ability. He said autonomy enacts development of civic participation, develops employees to be self-efficient and self-confident, and allows them to schedule their work time to avoid conflicts with social participation opportunities. Niehoff and Moorman (1993) discovered close monitoring (less autonomy) had a negative correlation with pro-social behaviors. However, they found close monitoring behaviors that include discussion of employee needs or personal life can mitigate the negative effect. More autonomy in

the form of freedom from close monitoring may encourage extra-role behaviors. Autonomy as a characteristic of job design encourages employees to act in ways that contribute to a positive social environment at work.

Coordination and Social Contributions

In this research, the researcher will connect positive social contributions as described above to coordination based on the definition of coordination in the literature. Coordination links organization parts together to accomplish a set of tasks. Coordinating mechanisms are patterns of action that improve information exchange and mutual understanding between teams and units (Dietrich, 2007). Dietrich (2007) determined a balanced coordination strategy reflects a high amount of interaction between actors within the teams. He also concluded that group interactions between teams are complemented by individual interactions, such as individual liaisons and email communications. Coordination combines and integrates individual parts of the organization to achieve common goals (Vanagas & Stankevic, 2014). The people, work products, and processes of an organization are held together in space and time by coordination. Similarly, specialization and division of labor require coordination to achieve the shared goals of the organization. To obtain the benefits of coordination in organizations, social contributions are required.

Effective Organizations Require Individual and Social Contributions

Individual job performance contributes to organizations from a task-oriented and social perspective (Borman & Motowildo, 1993). Task performance is progress or the completion of activities that are formally part of an employee's job description. Van Scotter and Motowildo (1996) redefined task performance to include facets of job dedication. It should include job dedication aspects like motivational factors and level of

expertise. However, task performance does not fully describe the contribution of an employee to the organization's effectiveness; there are social contributions as well (Borman & Motowildo, 1993). An employee's job performance also contributes to the organizational, psychological, and sociological environment of the organization. The term contextual performance coins these behaviors. They include volunteering to complete tasks outside of the worker's formal job description, displays of enthusiasm for completing a task, or extra effort put into organization goals. It includes interpersonal facilitation, such as interpersonal skills, helping behavior, and drive to keep good relationships with co-workers (Van Scotter & Motowildo, 1996). They are the same across any role in the organization. By contrast, task performance differs across the organizational level because the responsibilities of jobs should be unique amongst the organization.

A similar concept to contextual performance is organizational citizenship behaviors (Bateman & Organ, 1983; Smith et al., 1983). Organizational citizenship behaviors are those cooperative efforts allowing for flexibility and coping with necessary interdependence on one another through spontaneous prosocial acts (Smith et al., 1983). Bateman and Organ (1983) measured organizational citizenship behaviors using benevolent, cooperative, altruistic, and discretionary behaviors. In many jobs these behaviors are typically "extra-role" behaviors because they are difficult to measure and not a core requirement of production (Borman & Motowildo, 1993; Smith et al., 1983). The organizational citizenship behavior concept is rooted in the work of Katz and Kahn (1966) as supra-role behaviors that encourage the social aspects of an organization but are not required to complete assigned tasks. The prosocial behaviors of employees in the organization are a critical aspect of job performance. Autonomy is a vital but not a

standalone prerequisite for pro-social behaviors to occur (Beaty et al., 2001; Van Scotter & Van Scotter, 2021). In a literature review of job design by Oldham and Fried (2016), they called for further research on connections between autonomy and organizational citizenship behaviors.

Autonomy Effectiveness Differs Across Organizations

When performing research on the connection between autonomy and contextual behaviors, researchers consider differences in organizations. For companies with entrepreneurial orientation, autonomy is a key component of their functioning (Lumpkin et al., 2009). Lumpkin et al. argue that for companies seeking entrepreneurial value creation, key employees are robust leaders with a creative mindset and can produce ideas free from organizational constraints. Another autonomous approach to organization design is lateral leadership which entails the absence of a clear power structure (Kuhl et al., 2005). Lateral leadership emphasizes cooperation, negotiation, and influence between units or functions to get things done. Lack of a vertical power structure is a far more autonomous approach than hierarchy, and lateral leadership is a framework for organization design. Research has shown that more certain environments contain less autonomy (i.e., more structure) and more uncertain environments tend to develop more autonomy (i.e., less structure; Lawrence & Lorsch, 1967). When considering the level of autonomy for an organization, the design should account for differences in subsystems.

Summary

Findings of autonomy in the workplace show it is an important factor contributing to job satisfaction, intrinsic motivation, and positive response to work (Hackman & Oldham, 1976; Oldham & Fried, 2016; Rock, 2008; Slemp et al., 2018; Turner & Lawrence, 1965). However, much of the prior research studies autonomy as one

characteristic of many which contribute to these benefits (Hackman & Lawler, 1971; Rock, 2008). Researchers have explored how autonomy contributes to pro-social behaviors, civic participation, and extra-role behaviors (Kwok, 2020; Lopes et al., 2014; Niehoff & Moorman, 1993). However, the research is lacking a perspective on autonomy and the coordinating abilities of teams that work interdependently in an organization. Borman and Motowildo (1993) established that organizational effectiveness requires that job performance contributes both to task and contextual performance (interpersonal skills, helping, and drive to create good relationships with coworkers). Autonomy is a vital but not a standalone prerequisite for prosocial behaviors to occur (Beaty et al., 2001; Van Scotter & Van Scotter, 2021). The research has established some relationships between autonomy and prosocial behaviors, as well as the importance of this connection to organization effectiveness.

This study will seek to understand the relationship between autonomy as a standalone variable, and inter-team coordination to better understand the specific relationship. In this research coordination included social behaviors discussed in prior research: inter-team dependence, processes to work together, extra-role behaviors, and volume of coordination.

Chapter 3

Methods

This study explored the relationship between autonomy and coordination in organizations. It sought to understand how autonomy—as a job characteristic—and inter-team coordination in an organization were related. This mixed-method, cross-sectional study attempted to answer the question: what is the relationship between autonomy and inter-team coordination in organizations? This chapter consists of the research design, participants, data collection, and data analysis used to conduct the study.

Research Design

The research design adopted here was grounded in a positivist philosophy which allows observation through the senses to be factual (i.e., interviews, survey data, observation of behavior). Autonomy and coordination are topics often explored by researchers and it is an area of intense interest to practitioners. The researcher came to the research question through her own curiosity and experience, a review of existing literature, and the identification of a gap in existing research.

The researcher took a mixed-method approach by using both interviews and surveys. Quantitative data regarding job autonomy was collected via surveys of team members and qualitative data regarding coordination was collected via interviews of the team's manager, resulting in a mixed-methods research approach. The mixed methods data was used to establish a relationship between team autonomy and inter-team coordination.

The advantage of this design is that it controls for common-method variance. Common method variance risk is associated with the measurement method rather than the concepts being measured (Podsakoff et al., 2003). According to Podsakoff et al. (2003),

measuring multiple variables using the same method (one survey for both independent and dependent variables for example) may create a correlation caused by the method. By utilizing survey and interview data, the researcher collected data for the variables from multiple sources, thereby mitigating the risk of common-method variance which has been shown to artificially inflate the strength of many relationships. The researcher also compared the manager and team member responses about autonomy to test reliability.

Sample and Sampling

The population for this study was defined as U.S. companies in different industries with teams and team managers below the C-suite level. There were no limitations on industry. Within that group, team members had to be over 19 years old and employed in the organization for more than one year. The one-year requirement was made to ensure that the team members were acclimated to the organization's way of working and could reliably report on their type and level of coordination with other teams.

Companies and teams were identified via the researcher's professional network. Such a sampling approach is clearly a nonprobability sample (convenience sample) and may introduce some bias into the results if the researcher's network is not representative of the population. Company information, including size, industry, and other demographics will allow a comparison to determine if the sample is biased.

The participants were selected based on their willingness to participate and the agreement of both the managers and team members to participate. The researcher sent e-mails to first- and second-degree professional connections in her network who are managers of a team of four or more people. The researcher also used publicly available data to identify teams via sources like LinkedIn and e-mailed them. Finally, the

researcher posted requests for participants on various social networking websites. The e-mail/posts explained the participation requirements of the study, the broad research question and background of the research, and a request of participation. People were included in the sample if the manager agreed to be interviewed and team members agreed to take surveys. The researcher obtained e-mail addresses of team members from the manager to obtain their written agreement. A target sample size of 30 teams was set. More precisely, the goal would be 30 managers and 120 team members (or four members per team) surveyed.

Measurement

The independent and dependent variables—autonomy and coordination—were collected from both the team manager via interview and the team members via survey. The researcher used interviews to obtain qualitative data on a manager's beliefs about the team's autonomy and the level and effectiveness of inter-team coordination. Interviews were conducted via video call. The researcher conducted interviews to allow for control over the line of questioning and for observation of participant's reactions to questions or perceived tone. Limitations to this data collection type include receiving information that is filtered through the views of the interviewees and unreliable levels of perceptiveness or articulateness across interviewees. The researcher asked the eight questions in the interview:

1. Can you tell me about the team you manage? What kind of work do they perform? What are they responsible for?

2. What are the 1-3 group(s) your team regularly works with?

3. For each of these teams, is your team dependent on them or are they dependent on you?

4. What kind of routine systems or processes are in place to help your team coordinate with group X? (For example, do they have regular meetings, do they share an information portal, is there a liaison, or simply exchange emails?)

5. How often does your team use the practices you described in Question 4?

6. How often does your team or this group go above and beyond their responsibilities to support each other?

7. What's your overall evaluation—on a scale of 1 to 5 with 5 being best—of how well the team coordinates with (the other) group? (If multiple groups, provide scale response for each one).
   a. Can you give me an example of what a (insert score) looks like?

8. How much time do you spend actively managing the team versus letting them work independently?

The researcher followed each question with a line of questions deemed helpful and relevant to further understand autonomy and coordination on the team.

The researcher used surveys to collect quantitative data on the level of autonomy (i.e., if the individuals in the team believed they had high levels of discretion, power, and autonomy to make choices and decisions regarding their work methods and processes) as well as their sense of the quality of coordination. The Job Characteristics Inventory (see Appendix; Sims et al., 1976) was used to evaluate individual team members' job characteristics.

The Job Characteristics Inventory has been used before and has good reliability. The researcher added two additional questions to the survey which asked team members to assess the level of coordination:

1. How frequently do you participate in collaborative projects or activities with other teams in your organization? [Scale: Hourly, Daily, Weekly, Monthly, Less than monthly]

2. How many collaboration projects do you have underway with another team in your organization at a typical point in time? [Scale: 0, 1, 2-5, 6-10, 10+]

The questions were adapted from a Collaboration Survey developed by the Institute for Organizational Excellence (n.d.). The survey method was chosen because it allowed for rapid collection of data from a high number of team members reporting to the managers interviewed. The survey was cross-sectional because the research does not require consideration to change over time. It was important to obtain multiple perspectives on the team's level of autonomy, not just from the manager but from the team members. Additionally, the survey allows for evaluation of other job characteristics besides autonomy for understanding of alternative variable correlations. Limitations to surveys include the information being obtained via a formal rather than the natural field setting and may provide an incomplete picture if questions do not address important aspects of participants' views.

Data Analysis Methods

The qualitative data analysis followed a standard process described by Creswell and Creswell (2018); it moved from collecting and organizing raw data, to reading and assigning meaning to the data, then drawing themes and interpreting. To organize and prepare the data for analysis, interviews were transcribed from recordings, notes were moved to finalized written format, and then sorted by source of data (i.e., grouped by team and by manager or team member role). Next, the researcher coded the data by organizing the data into similar "chunks" and assigning a label to them, typically written in the margin (Rossman & Rallis, 2012). It involved segmenting, categorizing, and labeling categories based on participant's own language. The challenge was how to translate the manger's sense of effective coordination into a score that could be used with the survey data and the solution to that challenge is presented in Chapter 4.

Manager interview data was analyzed for words/phrases that indicate high or low coordination between teams. It was addressed directly by asking for the manager to assign a number (1 to 5), and double checked by looking at the different words/phrases they used in the other questions. Next the researcher interpreted the manager's perception of team autonomy. The researcher looked across the manager interviews and created a list of words used to describe the level of autonomy (e.g., high, sort-of, "I make most decisions," etc.). Then the researcher compiled similar words indicating "high" levels of autonomy, low levels, etc. The interpretations were translated to findings. The output of this analysis was a rating for coordination effectiveness (1 -5) and an assessment (1-5) of the team's autonomy.

The quantitative data obtained from the surveys were organized by team. Team member survey data was analyzed to measure high or low autonomy via the Job Characteristics Inventory (Sims et al., 1976). The team's autonomy score was the average of the individual autonomy scores. In addition to autonomy, the survey assessed the other core job characteristics (i.e., skill variety, task identity, task significance, and feedback from the job), the critical psychological states and work outcomes (i.e., experienced meaningfulness of the work, experienced responsibility for outcomes of the work, and knowledge of the actual results of the work activity), and two of the proposed moderator variables (i.e., growth need strength and context satisfaction). However, given the focus of this research on coordination and autonomy, only the autonomy scale was used in the analysis. The researcher also added questions to assess team members' perception of inter-team coordination.

Before the final analysis, the data were reviewed for reliability in several ways. First, the researcher analyzed if the manger's rating of autonomy from the interview was

the same as or within 1-point of the team's average autonomy rating from the survey (e.g., the manager's score of "4" matched the team's average autonomy score or was within 1-point of "4"). Second, the researcher analyzed whether the words managers used to describe coordination between their team and other teams corresponded to the manager's rating of coordination.

The scores from the manager interview on team coordination effectiveness and the autonomy scores from the survey were entered into an Excel spreadsheet. A correlation between autonomy and coordination was calculated to test the relationship, and a minimum significance level of $p < .10$ was used. The researcher created tables to show the relationship between team member autonomy and team coordination levels.

Chapter 4

Results

This study explored the relationship between autonomy and coordination in organizations. It sought to understand how autonomy—as a job characteristic—and inter-team coordination in an organization were related. This mixed-method, cross-sectional study attempted to answer the question: what is the relationship between autonomy and inter-team coordination in organizations?

This chapter presents the qualitative results of 22 interviews with managers on their beliefs about the level of inter-team coordination and perceived team member autonomy. It also presents the results of 63 surveys to collect quantitative data on the team members level of autonomy in their job (i.e., if the individuals in the team believed they had high levels of discretion, power, and autonomy to make choices and decisions regarding their work methods and processes) as well as the frequency of coordination. Finally, this chapter examines the relationship between autonomy and coordination based on the results of manager interviews and team member surveys.

Descriptive Statistics

Industry Statistics

The manager-team participants spanned 11 industries (see Table 1). Among the 11 industries, 15 companies were from financial and investment services and medical research and services. Twenty-two teams from these companies participated. The highest volume of teams that participated were in financial and investment services, technology, and medical research and services. An average of two teams participated per industry. Each team was made up of one manager and at least two team members. Each manager was interviewed, and their respective team members were surveyed. The highest number

of team members surveyed was in financial & investment services, followed by technology and consulting services. On average, six team members were surveyed per industry. The sample is biased toward service industries and is specifically biased toward financial and investment services and medical and research services.

Table 1

Industry Characteristics of the Sample

Industry	# of Companies	# of Teams Interviewed	# of Team Members Surveyed
Aviation and Aerospace Manufacturing	1	1	2
Casino and Entertainment	1	1	4
Consulting Services	1	2	9
Financial & Investment Services	4	7	20
Higher Education	1	1	2
Internet Publishing	1	1	3
Medical Research & Services	3	3	8
Restaurant	1	1	3
Technology	1	4	9
Wine	1	1	3
Total	15	22	63
Average/Industry	2	2	6

Qualitative Manager Interviews

The researcher conducted interviews with managers of each participating team to understand their beliefs about the level of inter-team coordination as well as their views on team autonomy. The researcher reviewed the managers' assessment of coordination and assigned a score of high, medium, or low to their response based on their answers to interview questions 3, 4, 5, 6, 7, and 7a (see Measurement section). Table 2 presents sample comments from managers and shows what score was given for each comment. To score questions 3, 4, 5, and 6, the researcher read the entirety of the response and coded a

segment of the transcription that was representative of the coordination level described by the manager, i.e., the Manager Coordination Score. For question 7, the managers provided a number on a scale of 1-5 with one being the lowest and five being the highest level of coordination with other group(s). If the participant worked with two or three teams, they were asked to give a coordination score for each team. Then question 7a asked the manager to provide an example of what each number they provided looks like to them. To assess reliability, the researcher assigned a coordination level of high, medium, or low to each example. Question 8 assessed the autonomy of team members (see Measurement section). The Manager Autonomy Score assigned (see Table 2) was based on the percentage of time a manager spends actively managing their team.

The interviews to assess the level of coordination perceived by each manager resulted in the Manager Coordination Score and Manager Coordination Rating (see Table 3). Coordination levels for questions 3, 4, 5 and 6 were assigned a number as follows: high = 5, medium = 3, and low = 1. Then the scores from 3, 4, 5, and 6 were averaged to obtain the Manager Coordination Score. To obtain the Manager Coordination Rating, the researcher took the average of the coordination scale numbers provided in response to Question 7, which asked them to rate how well their team coordinates with one or more other groups. Manager Autonomy Score (see Table 3) was obtained according to the percentage of time a manager spends actively managing their team; a high percentage of time managing the team reflects a low level of autonomy.

Table 2

Scoring of Manager Interview Data

Question	Score	Sample Comment	N	%
#3 Dependence For each of these teams, is your team dependent on them or are they dependent on you?	Medium	• "We are not dependent on them. They are more dependent on us" • "Yes and no"	7	32%
	High	• "We both are dependent upon each other" • "Success of our team is definitely dependent"	15	68%
#4 & 5 Routine Processes What kind of routine systems or processes are in place to help your team coordinate with group X? How often does your team use the practices you described in Question 4?	Medium	• "Touch points and weekly status checks and things of that nature." • "Majority of it is email"	8	36%
	High	• "We use project management software. And we definitely have lots of meetings." • "Morning and afternoon huddles"	14	63%
#6 Above and Beyond How often does your team or this group go above and beyond their responsibilities to support each other?	Low	• "On a scale of one to 10, probably a two" • "I don't know how they would go above and beyond"	2	9%
	Medium	• "Each of my team members would probably have a different answer" • "Some are better than others"	14	64%
	High	• "Our default is going above and beyond" • "They just strive for that every single day"	6	27%
#7 Coordination Scale	Low	• "1" • "2"	0[a]	0%

Question	Score	Sample Comment	N	%
What is your overall evaluation—on a scale of 1 to 5 with 5 being best—of how well the team coordinates with (the other) group? (If multiple groups, provide scale response for each one).	Medium	• "3"	3	14%
	High	• "4" • "5"	19	86%
#7a Scale Example Can you give me an example of what a (insert each score) looks like?	Low	• "We have to kind of go out and probe the other team a lot" • "Push and pull"	NA[b]	NA[b]
	Medium	• "A three is you don't really get a response back and you have to email a few times to get them to answer a question for you." • "there's so much variability"	NA[b]	NA[b]
	High	• "Four is being very responsive … reaching out … when they're done or they have questions, providing suggestions or like insights of their own" • "we're working really closely together and making sure that we're aligned before raising a concern"	NA[b]	NA[b]
#8 Autonomy How much time do you spend actively managing the team versus letting them work independently?	5/High	• Managing 0-20% of the time	14	63%
	4/High	• Managing 21-40% of the time	6	27%
	3/Medium	• Managing 41-60% of the time	1	5%
	2/Low	• Managing 60-80% of the time	1	5%
	1/Low	• Managing 81-100% of the time	0	0%

[a] "0" reflects the result that no manager gave a low rating regarding the level of coordination between his/her team and any of the 1-3 teams that team coordinated with.

[b] Not applicable because response was used to gauge reliability of question 7, and not aggregated for scoring.

Table 3

Team Autonomy and Coordination as Viewed by Manager

Team Code	Manager Coordination Score	Manager Coordination Rating	Manager Coordination Score and Rating are equal or adjacent (= <1)	Does manager's example agree with quantitative coordination score?	Manager Autonomy Score
I.A.	3.67	5.00	N	Y	5.00
I.B.	4.33	4.67	Y	Y	5.00
II.A	5.00	4.00	Y	Y	5.00
II.C	5.00	2.83	N	Y	5.00
II.D	4.33	3.75	Y	Y	5.00
II.E	4.33	2.67	N	Y	5.00
III.A	2.33	3.00	Y	Y	2.00
V.A	3.00	3.50	Y	Y	5.00
VI.A	4.33	4.33	Y	Y	5.00
VII.A	4.33	4.00	Y	Y	5.00
VIII.A	4.33	3.50	Y	Y	5.00
IX.A	3.00	5.00	N	N	5.00
X.A	4.33	4.00	Y	Y	5.00
XI.A	3.67	4.67	Y	Y	5.00
XII.A	3.67	5.00	N	Y	4.00
XII.B	3.00	4.33	N	Y	4.00
XII.C	4.33	4.00	Y	Y	3.00
XII.D	5.00	3.50	N	Y	4.00
XIII.A	3.67	3.50	Y	Y	4.00
XV.A	3.67	4.50	Y	Y	4.00
XVI.A	4.33	3.33	Y	Y	4.00
XVII.B	4.33	3.17	N	Y	5.00
		Agreed	64%	95%	

Manager interviews resulted in two scores on inter-team coordination and one score on their perception of their team's autonomy. On average, managers reported high levels of coordination (M = 4.0). Across companies, the Manager Coordination Score was clustered around the average with a standard deviation of 0.71. The Manager Coordination Rating was also high at 3.92 with a standard deviation of 0.71.

The researcher performed two reliability checks, one to assess reliability of Manager Coordination Rating and another to assess reliability of the Manager Coordination Score and Rating. As a reliability check of the managers' response to Question 7 (which was average to obtain the Manager Coordination Rating), the researcher compared managers' ratings of how well their team coordinated with each of one-to-three other groups, to the coordination level assigned to the example given by the manager in Question 7a. For example, if the manager said they coordinate at a 5 on a scale of 1-5 with another team, the researcher then asked the manager to provide an example of what a "5" looks like to them. The researcher assessed the example and assigned a high, medium, or low coordination rating to the example. In this example, if the researcher determined the manager's example of a 5 is a high level of coordination, the researcher recorded a "Yes" to indicate an aligned response (see Table 3). If not, the researcher recorded an "N" for no. Agreement was a Y if 1-2 = low, 3 = medium, and 4-5 = high. The number given on the coordination scale and the example provided agree 95% of the time (shown in Table 3, column Does manager's example agree with quantitative coordination score?). Therefore, the Manager Coordination Rating provided by managers was reliable. The Manager Coordination Score is compared to the Manager Coordination Rating to determine reliability. Sixty-four percent of the Manager Coordination Scores and Manager Coordination Ratings were equal or adjacent to each other. This level of agreement suggests a good but not great level of agreement between the researcher's assessment and the manager's assessment of their coordination level. Some caution in interpreting the manager's rating of coordination is warranted.

The Managers also responded to a question on team autonomy which resulted in a Manager Autonomy Score with a high average autonomy of 4.5 and a low standard

deviation of 0.802. On average, managers reported high autonomy scores with little deviation from the average.

Quantitative Survey Results

The researcher analyzed the results of 63 surveys to determine the level of autonomy experienced by each team (see Table 4). The autonomy scores of individuals were calculated in accordance with the Job Characteristic Inventory scoring methodology (Sims et al., 1976). The researcher averaged individual autonomy scores for each team and obtained the Team Autonomy Score. These scores were considered reliable as 0% of the teams had individual scores that differed by more than two scale points. The Team Autonomy Scores averaged 3.79 with a standard deviation of 0.42 and suggests that there is a relatively low level of dispersion in the scores.

The Individual Coordination Score was calculated as follows:

1. How frequently do you participate in collaborative projects or activities with other teams in your organization? "Hourly" = 5, "Daily" = 4, "Weekly" = 3, "Monthly" = 2, "Less than monthly" = 1

2. How many collaboration projects do you have underway with another team in your organization at a typical point in time? "0" = 1, "1" = 2, "2-5" = 3, "6-10" = 4, "10+" = 5

The researcher calculated the average of the participants responses to the coordination questions to obtain the Individual Coordination Score. The team's individual scores were averaged to obtain the Team Coordination Score. The Team Coordination Scores were slightly below medium on average at 2.98 and had a low standard deviation of 0.446.

The team member surveys resulted in a Team Autonomy Score and a Team Coordination Score. Team member surveys reported mid-range autonomy scores as shown by an average autonomy score of 3.787 and low standard deviation of 0.42. Team

members across companies determined they collaborated slightly lower than mid-range at

an average of 2.981 and low standard deviation of 0.446.

Table 4

Autonomy and Coordination Comparison

Team	Industry	Manager Coordination Score*	Manager Coordination Rating*	Manager Autonomy Score*	Team Autonomy Score**	Team Coordination Score**
I.A.	Service	3.67	5.00	5.00	3.88	2.50
I.B.	Service	4.33	4.67	5.00	4.00	3.00
II.A	Service	5.00	4.00	5.00	3.72	2.67
II.C	Service	5.00	2.83	5.00	3.92	3.00
II.D	Service	4.33	3.75	5.00	4.25	3.75
II.E	Service	4.33	2.67	5.00	4.08	3.25
III.A	Service	2.33	3.00	2.00	3.56	2.33
V.A	Service	3.00	3.50	5.00	3.92	2.50
VI.A	Service	4.33	4.33	5.00	3.17	3.00
VII.A	Service	4.33	4.00	5.00	3.46	2.88
VIII.A	Service	4.33	3.50	5.00	3.75	3.25
IX.A	Service	3.00	5.00	5.00	3.67	3.00
X.A	Service	4.33	4.00	5.00	4.00	3.63
XI.A	Service	3.67	4.67	5.00	4.58	3.75
XII.A	Service	3.67	5.00	4.00	3.25	3.25
XII.B	Service	3.00	4.33	4.00	4.42	2.50
XII.C	Service	4.33	4.00	3.00	3.67	2.75
XII.D	Service	5.00	3.50	4.00	4.06	2.83
XIII.A	Service	3.67	3.50	4.00	3.72	3.00
XV.A	Manufacturing	3.67	4.50	4.00	3.67	2.50
XVI.A	Service	4.33	3.33	4.00	2.67	3.75
XVII.B	Service	4.33	3.17	5.00	3.92	2.50
Mean		4.00	3.92	4.50	3.79	2.98
SD		0.71	0.71	0.80	0.42	0.45

Note. This table contains some redundancies with Table 3, that being reporting of the Manager Coordination Score, Manager Coordination Rating, and Manager Autonomy Score.
*Result of Manager Interviews, **Result of Team Member Survey

Manager v. Team Member Assessments of Autonomy and Coordination

The researcher compared the results of the qualitative interviews and the quantitative surveys (see Table 4). A comparison of these average scores suggested that managers rated both autonomy and coordination higher than team members. On average, a Student's t-test suggested that the Manager Coordination Score and Manager Coordination Rating were significantly higher than the Team Coordination Score. Manager scores were reported at 4.0 and 3.9 while team members reported medium coordination on average at 2.98. These represent significant differences at the $p < .01$ level. In addition, a Student's T-test suggested that managers reported higher average Manager Autonomy Scores (M = 4.5) than team members (M = 3.79) which is also significant at the $p < .01$ level.

Relationships between Autonomy and Coordination

Certain correlations provided a check on consistency between the perceptions of the two participating groups (see Table 5). The correlations of Manager Coordination Score with Team Coordination Score and Manager Coordination Rating with Team Coordination Score provide a check on the consistency with which the two participating groups perceived levels of coordination. Correlations between Manager Autonomy Score and Team Autonomy Score provide a check on the reliability of autonomy scores. These three correlations were all insignificant and consistent with the differences between manager and team ratings, suggesting that the managers and team members did not agree on the levels of autonomy and coordination present in their situations.

To directly examine the research question, the researcher correlated all teams' Manager Coordination Scores and Manager Coordination Ratings with Team Autonomy Scores as well as Manager Autonomy Scores with Team Coordination Scores. Initial

correlations among these variables were different from expectations, including no significant relationships (results not shown). Given the demonstrated reliability of the data, the significant differences between manager and team views of the same dimensions, and the lack of correlation between manager and team ratings of autonomy and coordination, the researcher reviewed and interpreted the initial results but also explored the data more carefully.

One conclusion from that exploration was that all the data, save one manager-team pair, were drawn from service industries. When this manager-team pair was dropped from the sample, the correlation results shown in Table 5 were obtained. With only one manager-team pair, it was not possible to make service vs. manufacturing comparisons. At the risk of ignoring data, the analysis proceeded with a more homogenous one industry sample.

Table 5

Correlations of Autonomy and Coordination

	1	2	3	4	5
1. Manager Coordination Score	1.00				
2. Manager Coordination Rating	-0.23	1.00			
3. Manager Autonomy Score	0.44**	0.14	1.00		
4. Team Autonomy Score	0.02	-0.12	0.23	1.00	
5. Team Coordination Score	0.32	0.09	0.42*	0.29	1.00

$*p < .10, **p < .05$

Two of three correlations between coordination and autonomy were significant. The first was between Manager Coordination Score and Manager Autonomy Score ($r = 0.443$, $df = 20$, $p < .01$). Here, coordination and autonomy were positively related but may suffer from common method variance. The second significant correlation is between the Manager Autonomy Score and the Team Coordination Score.

The manager's perception of autonomy and the team's assessment of coordination was positively correlated and significant ($r = 0.417$, $df = 20$, $p < .10$). There is no risk of common method variance in this relationship and supports the proposition in the research question. The final correlation between autonomy and coordination shows a positive correlation between the Team Autonomy Score and Team Coordination Score, however, this correlation was not significant. There was no correlation between the Manager Coordination Score and the Team Autonomy Score.

Summary

This chapter presented the results of the study. The results of the qualitative manager interviews resulted in two coordination scores and one autonomy score. The results of the quantitative survey data resulted in a team autonomy score and coordination score as perceived by the team members. Finally, a comparison and correlation analysis showed (a) the managers reported higher autonomy and coordination scores than team members and (b) autonomy and coordination were significantly and positively correlated. Chapter 5 will draw conclusions from the study results and discuss implications for further research.

Chapter 5

Discussion

This study explored the relationship between autonomy and coordination in organizations. It sought to understand how autonomy—as a job characteristic—and inter-team coordination in organizations were related. It addressed the research question: what is the relationship between autonomy and inter-team coordination in organizations? This chapter concludes this research study by discussing the research question, exploring how the results confirm or refute prior research uncovered by the literature review, identifying limitations of the study, recommending opportunities for future research, and highlighting the importance and application of these findings to the field of organization development.

Discussion and Implications

The results of this research suggested that autonomy and inter-team coordination were positively and significantly correlated across 21 teams at 14 companies in a variety of service industries. For the significant relationship between the Manager Autonomy Score and the Team Coordination Score, the autonomy score was determined using the manager's perspective on how much time he/she spent actively managing versus letting the team work independently. This measure equates more time spent letting team members work independently to more autonomy. The coordination score was determined by the team member's perspective of how frequently they participated in collaborative projects with other teams and the number of collaborative projects they typically have underway with other teams. The correlation of these variables implies teams that have a high percentage of independent work time and spend little time being actively managed by their managers also coordinate on a higher volume of collaborative projects with other teams in the organization. Similarly, it implies that teams that have a low percentage of

independent work time and are actively managed more often, collaborate on a lower volume of projects with other teams in their organization. The result supports Kwok's (2020) exploration of the research on autonomy as a social good which says that autonomy is connected to cooperative disposition, coordination efforts, conflict resolution skills, and confidence in political ability. These behaviors in autonomous teams would support a higher volume of collaborative projects.

The other significant relationship between autonomy and coordination was the positive correlation between the Manager Coordination Score and the Manager Autonomy Score. This correlation contains common method bias, reducing its validity. The Manager Coordination Score focused on the manager's perception of how their team coordinates with other teams based on three criteria, including dependency on other teams for success, usefulness and availability of routine systems and processes for coordination, and frequency of work done above and beyond typical responsibilities for the benefit of another team. This correlation implies that teams who spend more time working independently and less time being actively managed coordinate more than teams who spend less time working independently. Research by Niehoff and Moorman (1993) discovered close monitoring is negatively correlated with pro-social behaviors but close monitoring including discussion of employee needs can mitigate the negative effect. This research does not delve into the context of close monitoring conversations. Future researchers studying this topic may consider including questions on the nature of the discussion to better understand if the relationship between autonomy and coordination is affected when management style is considered.

Due to common method bias in the correlation between Manager Coordination Score and the Manager Autonomy Score, the researcher utilized the correlation without

common method bias between the Manager Autonomy Score and the Team Coordination Score to conclude autonomy and coordination are positively correlated when coordination is defined by the volume of projects different teams collaborate on together, and less reliably when coordination is based on dependency, systems and processes, and above and beyond behaviors. The relationship was not consistent—in common methods and non-common method circumstances. This may suggest that the relationship may not be very robust, or that other non-measured variables (like industry or leader orientation) may be involved in the relationship.

Prior research on autonomy and coordination focused on the relationship between autonomy and organization's social environment or cooperative behaviors (Bateman & Organ, 1983; Borman & Motowildo, 1993; Katz & Kahn, 1966; Smith et al., 1983; Van Scotter & Motowildo, 1996). The results of this research connecting independent work time and volume of collaborative projects is aligned to the positive relationship between autonomy and cooperative behaviors, however, this research does not specify the behaviors enacted in the collaborative project.

This analysis does not support the relationship between autonomy and coordination when autonomy is defined by the Job Characteristic Framework (i.e., if the individuals in the team believed they had high levels of discretion, power, and autonomy to make choices and decisions regarding their work methods and processes) and coordination is defined by dependency, routine systems and processes, and above and beyond behaviors. These definitions represent the Manager Coordination Score and the Team Autonomy score, which were not correlated.

Considering that the previous correlation between autonomy coordination was not significant, while the earlier correlation between autonomy and coordination was

significant, the researcher noted the differences in the relationship. The evident difference between the two correlations is between the methods of measurement. The insignificant relationship between Manager Coordination Score and Team Autonomy Score measures autonomy by team members discretion, power, and decision-making freedom while the significant relationship between Manager Autonomy Score and Team Coordination Score measures the amount of active management time. Because the research did not explore how active managing time is carried out, the difference in significance may be due to differences in leadership style. Creating autonomy for workers is partly determined by leadership style (Slemp et al., 2018). Although this research shows low active management time is significantly correlated to coordination, the leadership style may or may not be promoting autonomous workers. This implies the significant relationship could be made clearer if the style of management is explored to better understand how active managing time is spent. Similarly, the insignificant relationship measures coordination by dependency, routine systems, and processes, and above and beyond behaviors while the significant relationship considers frequency and number of collaborative projects. The difference here highlights that unlike the coordination variable in the insignificant relationship, the coordination variable in the significant relationship does not specify the aspects of coordination employed in these collaborative projects. Therefore, further exploration into the nature of collaborative projects will help future researchers better understand what factors of coordination correlate with low active management time (i.e., high autonomy). The differences in significance highlight the vagueness of the significantly correlated variables.

An unexpected finding of the analysis showed that on average, managers view their team's autonomy and inter-team coordination as significantly higher than the team

member's view of their autonomy and coordination. As discussed previously the Manager Coordination Score was based on inter-team dependency, routine systems and processes, and above and beyond behaviors. Manager Coordination Rating is based on the manager's determination of how well their team coordinates on a scale of 1-5. Both the Manager Coordination Score and Manager Coordination Rating variables were higher on average than the Team Coordination Score which was based on the team member's perspective of how frequently they participate in collaborative projects with other teams and the number of collaborative projects they typically have underway with other teams. Although the criteria for Manager Coordination variables are slightly different than the Team Coordination variable, the comparison shows that managers view their teams to coordinate at a higher level than teams perceive they are coordinating. The comparison between managers' perception of their team's autonomy and the team member's autonomy results also shows a discrepancy from some difference in criteria. Manager Autonomy Score is determined by the manager's perspective of how much time they spend actively managing versus letting their team members work independently. Team Autonomy Score is determined using the Job Characteristics Inventory (Sims et al., 1976) which determines if the individuals in the team believed they had high levels of discretion, power, and autonomy to make choices and decisions regarding their work methods and processes. One could assume that the more time a team member is left to work independently, the more discretion, power, and decision-making autonomy they may have, but the assumption is not clean. On average, the managers viewed coordination and autonomy to be higher than team members viewed coordination and autonomy, however the criteria for scoring these variables differed between managers and team members making the result of the comparison less reliable.

Limitations and Recommendations

The main limitation of the analysis was differences in criteria used to assess similar variables. The researcher interviewed managers and survey team members separately. Both manager interviews and team member surveys included questions on coordination and autonomy, however, the questions used to assess coordination and autonomy in the two groups were different. For example, team members took a Job Characteristics survey to assess their autonomy while managers were asked about how much time they spent actively managing their team to assess the team's autonomy. Autonomy was assessed using different criteria, which made it difficult to compare the variables and their correlations cleanly. Future research may consider using similar questions or similar criteria to assess coordination between the two groups and to assess autonomy between the two groups.

As mentioned in Chapter 3, there were a few limitations to the research design. First, companies and teams were identified via the researcher's professional network. Such a sampling approach is clearly a nonprobability sample (convenience sample) and may introduce some bias into the results if the researcher's network is not representative of the population. Future research should consider sampling a larger population or focusing the research on an industry, job type, or other population type to reduce bias in the sample. Second, interviews were conducted via video call. The researcher conducted interviews to allow for control over the line of questioning and for observation of participant's reactions to questions or perceived tone. Limitations to this data collection type include receiving information that is filtered through the views of the interviewees and unreliable levels of perceptiveness or articulateness across interviewees. Future research may consider asking the same questions to managers and team members to get

multiple perspectives on the information. Multiple sources of information will reduce unreliability of data based on individual perceptiveness or articulateness.

Importance to Organization Development

The research supports a positive correlation between a characteristic of job design, autonomy, and teams who have a high volume of projects requiring coordination. Organization Development (OD) practitioners may consider this relationship when designing jobs in a system that requires extensive coordinating efforts among different teams. Lopes et al. (2014) argued that autonomous behavior would influence pro-social behavior by creating self-esteem, personal growth, and well-being. They said autonomy teaches the individual to self-govern, which fosters pro-social behaviors and well-being. On teams that are expected to coordinate with other teams on many projects, managers may align their leadership style to allow for higher levels of autonomy, so that employees can develop the skills related to coordination. OD practitioners can utilize the research on leadership styles that create autonomy for workers. Research has been done on a style coined Leader Autonomy Support which encourages autonomous behaviors (Slemp et al., 2018). Alternatively, when designing organization structures that require horizontal collaboration, an OD practitioner may consider whether the job design will allow for autonomy. If autonomous job designs cannot be tolerated by the system, the OD practitioner may consider if there are other factors that will support the collaborative environment. OD practitioners can utilize this research to consider the variables that will create more effective organizations when autonomy or coordination is required.

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Appendix: Job Characteristics Inventory

Determine responses to the following questions on a scale of 1-5 (1 = very little, 3 = a moderate amount, 5 = very much)

1. To what extent do you start work that is finished by another employee?

2. How much variety is there in your job?

3. How much are you left on your own to do your own work?

4. How often do you see projects or jobs through to completion?

5. To what extent do you find out how well you are doing on the job as you are working?

6. How much opportunity is there to meet individuals whom you would like to develop friendship with?

7. How much of your job depends upon your ability to work with others?

8. How repetitious are your duties?

9. To what extent are you able to act independently of your supervisor in performing your job function?

10. To what extent do you complete work that has been started by another employee?

11. To what extent do you receive information from your superior on your job performance?

12. To what extent do you have the opportunity to talk informally with other employees while at work?

13. To what extent is dealing with other people a part of your job?

14. How similar are the tasks you perform in a typical workday?

15. To what extent are you able to do your job independently of others?

16. To what extent is your job equivalent to being one small cog in a big machine?

17. To what extent are the results of your work clearly evident?

Determine the amount each of the following occurs at your job on a scale of 1-5 (1 = "minimum amount", 3 = "a moderate amount", and 5 = "a maximum amount")

18. The feedback from my supervisor on how well I'm doing

19. Friendship from my co-workers

20. The opportunity to talk to others on my job

21. The opportunity to do a number of different things

22. The freedom to do pretty much what I want on my job

23. The degree to which the work I'm involved with is handled from beginning to end by myself.

24. The opportunity to find out how well I am doing on my job.

25. The opportunity in my job to get to know other people.

26. Working pretty much by myself

27. The amount of variety in my job

28. The opportunity for independent thought and action

29. The opportunity to complete work I start

30. The feeling that I know whether I am performing my job well or poorly

31. The opportunity to develop close friendships in my job

32. Meeting with others in my work

33. The control I have over the pace of my work

34. The opportunity to do a job from the beginning to end (i.e., the chance to do a whole job)

35. The extent of feedback you receive from individuals other than your supervisor

36. To what extent do you do a "whole" piece of work (as opposed to doing part of a job which is finished by some other employee?)

37. The opportunity, in my job, to give help to other people