The Big Picture: How the New Use of an Old Theory will Enhance Leaders' Perspective on Management

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Managers experience difficulty focusing their time on higher-level management activities (strategy, innovation, change, etc.) to promote the success of their companies because lower-level issues arise requiring their attention. These interruptions are disruptive to managers because they interfere with creating opportunities for organizational growth. Alderfer's ERG theory is a model of individual motivation. However, this research proposes its utility in examining organization-level activity and management. The two goals of this research are to establish the practicality of the ERG theory for organization-level analysis and to show the negative impact of interruptions and how they affect managers.

INTRODUCTION

> "Growth will continue to be a desirable and indeed a necessary business objective."
> Peter F. Drucker

The purpose of this exploratory research is to provide a model for practicing managers to more effectively operate within their organizations and to focus on particular factors which compromise management's engagement in organizational growth activities. Specifically, this project will examine the effects of interruption on managers' ability to dedicate their time to those responsibilities which will ensure the future of the enterprise.

Alderfer's (1969) Existence, Relatedness, and Growth (ERG) model is a theory of individual needs motivation. Alderfer's model is a refinement of Maslow's theory of the Hierarchy of Needs. Alderfer reformulated Malsow's five need levels into three more general need levels (Sahito & Vaisanen, 2017). The ERG model differs from Maslow's model in two important regards. First, according to Maslow, individuals progress up the hierarchy as a result of the satisfaction of lower-order needs. In contrast, Alderfer's ERG theory suggests that in addition to this satisfaction-progression process, there is also a frustration-regression process. Hence, when an individual is continually frustrated in his or her attempts to satisfy growth needs, a lower-level need (such as relatedness needs or existence needs) will reemerge as a primary motivating force, and the individual is likely to redirect his or her efforts toward lower-level needs. Second, whereas Maslow's model has individuals focusing on one need at a time, Alderfer's model suggests more than one need may be operative (or activated) at the same time. Thus, Alderfer's model is less rigid, allowing for greater flexibility in describing human behavior (Anyim, Chidi, & Badejo, 2012).

Theory Development

In writing about the development of theory, Mintzberg (2007) wrote "…we need all kinds of theories—the more, the better. As researchers, scholars, and teachers, our obligation is to stimulate thinking, and a good way to do this is to offer alternate theories—multiple explanations of the same phenomena" (p. 356). Although the ERG model is not a new theory, for the purposes of this project it will be used in a new way. In this research, the ERG theory will not be used to study individual motivation, but to examine organizational composition and activity. This study aims to demonstrate the utility of the ERG theory in facilitating the exploration and explanation of certain organization phenomena, the conceptualization of the organization and its function. The frustration regression process of Alderfer's ERG theory will be converted to the interruption regression process for purposes of explaining how managers are distracted from working on growth-related duties to attend to lower-level organizational needs.

Organization as a Living Entity

By taking a theory of individual motivation and using it to explain organizations and their "behaviors", it seems logical to take the next step and consider an organization as a single living entity. This metaphor has been used before. The "organic" view of the organization has been examined by many well-known researchers (Burns and Stalker, 1961; Kast and Rosenzweig, 1973; Miller, 1978; Mintzberg, 1993; Morgan 2006). The term "organic" suggests that, like living things, organizations change their structures, roles, and processes to respond and adapt to their environments. Staw (1991) makes the argument that organizations tend to look like and act like individuals. And, because they do we should therefore use individual psychology as a helpful analogy in organizational theorizing.

Whetten et al. (2009) extended this idea by suggesting organizations can be thought of as social actors, complete with motives, drives, and intentions. This perspective, among other things, allows for "vertical theory borrowing" of psychological phenomena to explain organizational action. It is justified by the fact that organizations are accorded the status of social actor in modern society—they are granted sovereignty and held accountable for their actions (Halgin, Glynn, & Rockwell, 2018).

LITERATURE REVIEW

This section will consist of an explanation of the ERG model by detailing the levels of existence, relatedness, growth, and the interruption process. The literature review will expound upon how the ERG model is mapped onto the organization and practice of management, and support the logic of viewing an organization from this perspective. The organizational components detailed (i.e. production, culture, strategy, etc.) are not meant as a comprehensive list of every organizational process which fits into each particular level. Instead, they are meant as illustrations for the reader to gain understanding of the ERG theory as an organization level construct. The interruption principle will be the focus of this study and how it may be explained with the use of the ERG theory.

Existence

> "We will now discuss in a little more detail the Struggle for Existence."
> Charles Darwin

Alderfer (1969) introduced an existence component as one of the core needs of human motivation. The existence needs comprise what is necessary for survival (i.e. food, water, sleep, shelter, etc.). For example, hunger and thirst represent deficiencies in existence needs. In the organizational context, existence needs would constitute those activities which are necessary for an organization's daily survival. Manufacturing, services, purchasing, distribution, and administrative duties would qualify as existence needs. Mintzberg (1993) classifies the employees of an organization who perform the existence needs as the operating core.

Specifically, he writes that the operating core of the organization encompasses those members—the operators—who perform the basic work related directly to the production of products and services. Mintzberg (1993) writes "The operating core is the heart of the organization, the part that produces the essential outputs that keep it alive" (p. 12). Organizations exist to satisfy society's needs for goods and services. The operations function is responsible for creating those goods and delivering those services; without operations, there is no reason for the other functions to exist (Fogiel, 2000).

Relatedness

> "All things appear and disappear because of the concurrence of causes and conditions.
> Nothing ever exists entirely alone; everything is in relation to everything else"
> Buddha

Alderfer (1969) introduced a relatedness component as one of the core needs of human motivation. These include all the needs which involve relationships with significant other people. Family members are usually significant others, as are supervisors, coworkers, subordinates, friends, and enemies. One of the basic characteristics of relatedness needs is satisfaction depends on a process of sharing or mutuality. People are assumed to satisfy relatedness needs by sharing their thoughts and feelings. This process markedly distinguishes relatedness needs from the existence needs because the process of acceptance, confirmation, understanding, and influence are elements of the relatedness process.

In the organizational context, relatedness needs are those which describe how a company's employees relate to each other and how a company relates to its environment. These needs would be comprised of a company's culture, climate, and structure (both formal and informal), its marketing, and its efforts of social responsibility, if any. Schein (2010) defines culture as a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way you perceive, think, and feel in relation to those problems.

Social responsibility is a fitting example of relatedness as it pertains to an organization relating to its environment. As Walker and Dyck (2014) wrote, corporate social responsibility has emerged as an important factor in how an organization is perceived, its corporate reputation. Walton (1967) argued the concept of corporate social responsibility is important because it recognizes the intimacy of the relationships between the corporation and society and realizes such relationships must be kept in mind by top managers as the corporation and the related groups pursue their respective goals.

Growth

> "Without continual growth and progress, such words as improvement,
> achievement, and success have no meaning."
> Benjamin Franklin

In Alderfer's (1969) ERG theory the level of growth is one of the core needs of human motivation. The growth needs include all of the needs which involve a person making creative or productive effects on oneself and the environment. A person experiences a greater sense of wholeness and fullness as a human being by satisfying growth needs. Thus satisfaction of growth needs depends on a person finding the opportunities to be what she is most fully and to become what she can, to develop her full potential (Alderfer, 1969). In the organizational context, it is the contention of this researcher that growth needs are those which are designed to ensure long-term success of the firm. Strategy, innovation, leadership, change, vision, and decision-making are examples of growth activities. Organizational growth can potentially provide businesses a myriad of benefits including: greater efficiencies, increased power, increase profits, and increased prestige for organizational members. Many firms desire growth because managers have come to expect growth as a natural condition, and growth is equated with progress.

Consequently, organizational growth is often used as an indicator of effectiveness for businesses and is a concern of many practicing managers (Redmond, 2013).

The Oxford Dictionary (2012) defines growth as increasing in size or value, and it lists development, evolution, and advancement as synonyms. Growth in the business sense is often gauged by measurable indicators such as revenue growth, sales growth, profitability, and an increase in the number of employees. (Harbermann & Schuilte, 2017; Hedija, 2017; Spital and Bickford, 1992; Venkatraman and Ramanujam, 1986). These financial indicators of success for the organization correlate very well with financial success of the individual. One can obtain a level of income which far exceeds what is necessary for existence (food, clothing, shelter, etc.) and the additional income can enable the individual to pursue avenues of growth other than monetary success. Therefore, just as the growth concept with the individual is not solely focused on the financial success of the individual or the physical growth of the body, the growth concept for the organization is not solely focused on increases in monetary or size measures.

According to Kaplan and Norton (2006), the traditional financial measures used for gauging organization growth can give misleading signals and are out of step with the skills and competencies companies are trying to master today. They advocate a learning and growth perspective focusing on human capital development, which includes career development and leadership development, and knowledge management with the positive outcome of enterprise-level synergies. In total, what is proposed is a balanced approach where the financial perspective of the organization is just one component in the system to be considered in the success and growth of the firm (Perkins, Grey, & Remmers, 2014).

Previous research reveals firm growth is a multi-dimensional phenomenon (Harbermann & Schuilte, 2017). There is substantial heterogeneity in a number of factors associated with firm growth and all firms do not grow in the same way (Eiriz, Faria, & Barbosa, 2013). A company fulfilling its growth level needs is experiencing multi-dimensional growth. Pandy and Gupta (2008) classify a firm operating on this level to be a spiritually conscious organization. A spiritually conscious organization is engaged in meaningful work in whatever area it is operating. Management decisions are inspired by an awareness of the organization being embedded in its social and natural environment (Pandy and Gupta, 2008). The Fortune list of best companies to work for in America reaffirms that these are the places where people find work meaningful. They feel they are contributing towards a larger cause (Nusca, 2018).

Burlingham (2005) wrote it is a widely accepted axiom of business for great companies to grow their revenues and profits year after year. Yet, some entrepreneurs have rejected the pressure of endless size and financial growth to focus on more satisfying business goals. Goals like being great at what they do, creating a superb place to work, providing excellent customer service, making extraordinary contributions to their communities, and finding exceptional ways to lead their lives. At this level, growing in this manner, the organization is able to unleash the human power of introspection and reflexivity and show the capability to renew, adapt, and transform itself. In the context of workplace, evidence of this kind of growth is visible in organizational innovation, enhanced learning, development, and creativity (Arjoon, Turriago-Hoyos, & Thoene, 2018; Burlingham, 2005; Wakhlu, 2000). Sharma and Talwar (2007) classify this form of growth as multi-dimensional and striving for the attainment of excellence. More than just profits, this philosophy of growth concentrates on the universal well-being of the organization.

Interruption

> "There cannot be greater rudeness than to interrupt another in the current of his discourse."
>
> John Locke

The negative impacts of interruptions in modern work environments are well documented. They can increase job stress, task completion times, and error rates in individual activities (Baethge, Rigotti, & Roe, 2015). Interruptions can also cause coordination problems, work overload, and time pressure in team-based activities (Jett & George, 2003; Reder & Schwab, 1990). All of which may regress a manager down the ERG scale. Many researchers have also written about interruption as it pertains specifically to managers (Radner, 1975; Sayles, 1979, Sikula & Sikula, 2007; Stewart, 1988; Vesala & Tuomivaara, 2015).

Mintzberg (1973) posited that the manager could expect no concentration of efforts because his activities are characterized by brevity, variety, and fragmentation. In a quantitative paper, Radner (1975) elaborates on brevity, variety, and fragmentation by explaining:

> A manager usually supervises more than one activity. For any given level of search effort per unit time, the opportunity cost of searching for improvement in one activity is at the neglect of others. A common managerial behavior is to pay attention only to those activities that are giving the most trouble; this is colloquially called "putting out fires" (p. 209).

The activities of managers tend to be fragmented as well as varied. Interruptions occur frequently, conversations are disjointed, and important activities are interspersed with trivial ones, requiring rapid shifts in mood. A manager may go from a budget meeting involving decisions about spending millions of dollars to a discussion about how to fix a broken water fountain (Sayles, 1979).

Benefits of Interruption

The case has been made for the benefits of interruption. Although not as extensively researched or written, the standpoint exists that interruptions can possess positive aspects instead of the negative which has been the viewpoint of most researchers of interruptions in management. Information interruptions and managing by interruption can actually make management run more smoothly in today's fast-paced, digital and electronic work environment. And, can even provide a break from monotonous activities. (Murray & Khan, 2014; Paczkowski and Kuruzovich, 2016; Sikula and Sikula, 2007). For example, Sikula and Sikula (2007) advocate for management by interruption, they write that management by interruption demands we recognize the positive aspects of, rather than the negative connotations associated with, frequent interruptions. Today's managers should expect interruptions, whereas in the past interruptions were viewed as unexpected.

Interruption Viewed as Disruptive

The proposal of this research is that an interruption is disruptive to an executive or manager because it takes him away from his work of creating opportunities for growth for the organization. Not only is the interruption itself disruptive, but studies have also evidenced the phenomena of *resumption lag* (Altmann & Trafton, 2007) and *warm-up effect* (Anderson, Fincham, & Douglass, 1999) to illustrate the time required after an interruption, to resume the original task. O'Connaill and Frohlich (1995) even found that forty one percent of the time people do not resume their original task following an interruption. O'Connell (2008) reports interruptions are much more than a nuisance, they have a profound effect on productivity levels, and not surprisingly, the economy.

A practical justification for this study is the fact researchers claim interruption consumes 28 percent of the workday and costs $588 billion in America (Spira & Feintuch, 2005). Another important reason for this study is its potential to be distinctive from other studies conducted about the interruption phenomenon. Many of the studies did not involve real-world interruptions, they were simulations such as programming VCRs or computer games. These studies did not address the real world complexities of how interruptions may affect managers in the performance of their intellectual, higher-level duties. Based on previous research and given the need to continue research into this subject, the following hypotheses are suggested:

Hypothesis 1: *There is an association between the number of interruptions and the level of interference with flow of thought.*

Hypothesis 2: *There is an association between the number of interruptions and the level of interference with productivity.*

Hypothesis 3: *There is an association between the duration of interruptions and the level of interference with flow of thought.*

Hypothesis 4: *There is an association between the duration of interruptions and the level of interference with productivity.*

Hypothesis 5: *The mean level of disruptiveness for three methods of interruption (telephone, email, and in-person) is not the same.*

METHODOLOGY

> "If we knew what it was we were doing, it would not be called research, would it?"
> Albert Einstein

Qualitative and quantitative methods are not simply different ways of doing the same thing. Instead, they have different strengths and logics and are often best used to address different questions and purposes. The strengths of qualitative research derive primarily from its inductive approach, its focus on specific situations or people, and its emphasis on words rather than numbers (Maxwell, 2013). A particular strength of quantitative research is the statistical analysis allows for generalization, to some extent, and can provide methods and results which are repeatable. Given this logic, this research utilized both quantitative and qualitative methods.

The questions addressed in this study include: Do interruptions occur which require a manager's attention preventing him from fulfilling the organization's growth needs? If so, what can I learn about it? What is the nature of these interruptions? Are these interruptions regressive in nature? Are the interruptions disruptive or beneficial to the manager/organization? If they are disruptive or beneficial to the manager/organization, how are they disruptive or beneficial to the manager/organization?

Content analysis was used. Methods included a survey questionnaire, structured interview, and open-interview techniques with managers of small businesses. Open-ended questions were used. Flexibility to stray from the list of questions as needed was expected. The interviews were audio recorded. Notes were taken from the interviews. Survey methods involve and are most useful for gathering information about the current status of some target variable within a particular collectivity, then reporting the summary of findings. The summary includes data in quantitative form (Murray, 2003). The target variable for this study was interruption. Comparative statistics as well as analysis of variance was performed on the quantitative data collected. Correlation analysis was utilized to investigate the relationships outlined in several hypotheses.

Sampling: This research utilized purposeful sampling. Those selected for the research were all mid-level to executive-level managers. A total of forty five managers from six companies participated in the study. Revenues for these companies ranged from approximately $2 Million to $25 Million per year. The companies studied for this research would all fall into the category of small businesses. The range of employment for the participating companies was from approximately fifteen to three hundred people. The majority of the companies have bureaucratic structures with layers from front-line employees to supervisory level to middle management to upper management to the executive level.

Researching these companies resulted in data which is reliable and generalizable for two main reasons. One: when speaking of the U. S. economy, of the 126 million non-farm private sector workers in 2017, small firms employed 58.9 million and large firms 67.1 million. Businesses employing less than 500 people are responsible for the employment of nearly half of the private-sector workforce and generate two out of three net new jobs. Therefore, when speaking of American business, one is largely speaking of small business (SBA, 2018; Schimpp, 2017). Two: even large corporations are divided by country, region, state, city, function, organization structure, unit and/or branch. Often these smaller units or divisions operate autonomously. Some of the largest companies in their respective industries thrive from structuring themselves to operate like many small businesses, instead of one large corporation (McAdam & McCormack, 2001; Meyer, Cohen, & Nair, 2017; Muthusamy & Dass, 2014).

RESULTS

"We must reinforce argument with results."
Booker T. Washington

The Results section will provide details of the findings which address the research questions and the five hypotheses. *Do interruptions occur which require a manager's attention preventing him from fulfilling the organization's growth needs?* Managers expressed how interruptions and the potential for interruptions alter when they are able to concentrate on the responsibilities and projects which are oriented for the longer-term importance of their organizations. The following quotes are merely a sample of the many which support this claim and are evidence interruptions can interfere with managers' attempts to fulfill their organization's growth needs. "I think it delays when I actually start working on them, so I think you can fill a day with probably not the priority type work items you need to be working on. You fill it with whatever comes through the door or through the email."

"I've often thought if I just went home and worked for a day, would I be more productive, you know, to just not be available." "It is extremely difficult for me to plan my daily activities. So many unexpected things arise throughout the day requiring my attention that often times the important projects I need to and want to work on are severely delayed." "I usually try to outline what I would like to do each day, but I know in advance that I will not be able to fully adhere to the schedule. Interruptions repeatedly occur and some days can have a large effect on what I can accomplish."

If so, what can I learn about it? What I have learned is the continuum from beneficial to disruptive can be rather wide concerning where an interruption may fall. Depending upon the manager, the company, and the particular interruption, managers believe interruptions can be both good and bad, and managers expressed both positive and negative feelings about interruptions.

What is the nature of these interruptions? Managers were asked to assign percentages to the content of the interruptions in four major categories: operations, services, employee relations, and strategy. The results are: Operations: Mean = 31%, Services: Mean = 36%, Employee Relations: Mean = 16%, Strategy: Mean = 13%. As the numbers show, 67 percent of interruptions are in regards to operational or service issues. Many of the managers claimed they rarely had interruptions concerning problems with employees. The lowest percentage of interruptions were strategic in nature. Managers also expressed in the interviews that common interruptions involve questions from others wanting information: "If an employee has questions then they will interrupt me. Basically, it's people seeking information." "…mainly just to ask for information or if they need assistance with something." "…..somebody needing advice on how to handle a situation." "I get a lot of questions from employees concerning production issues."

Are these interruptions regressive in nature? The survey addressed the essence of the interruptions experienced by the participating managers. The two categories of: to solve an immediate problem and, to further and organization's goals, provide insight into the possibility of interruptions possessing a regressive element. A substantial portion of interruptions are of an immediate nature, to solve an immediate problem or to gain information. A low percentage of interruptions were reported to address organizational goals. Help to solve an immediate problem: Mean = 32%, To further an organization's goals: Mean = 12%, To provide information: Mean = 31%, To receive information: Mean = 22%. Often interruptions involve the exchange of information. The person being interrupted is asked to provide information more often than he/she is provided with information. As shown by the results, the majority of interruptions are in regards to operations or service issues.

Other than interruptions which concentrated on the existence level needs of operations and services, the managers also described examples of interruptions which could be classified as relatedness level activity: "…sales people that have visited [a client] come back, they want me to know that and so said "hi". They could have put it in an email or they could, their contact report. They just uh, they kind of use that as a way to get their nose in the tent and then at the same time, all of a sudden they are telling me how their trip went and maybe who they took to dinner, how many attended the little lecture they put on or something like that. So, it kind of grows into something more than they originally showed up to share."

"I get the occasional, just stop in, sit down, have a cup of coffee, how are you doing. You know, here is the latest joke I've heard or something like that or here's how my kid did last night in his ballgame or something like that."

How are they disruptive to the manager/organization? It seems interruptions can be disruptive to managers. So much so, that in order for managers to focus on their higher level projects and responsibilities they must adjust how, where, and when they work. One manager stated: "One of the things I do that I find really beneficial is if I've got a project that I really need to concentrate on, I absolutely leave the office. I'll go offsite and I'm so much more productive because I've got a continuous thought process and workflow process that works for me. That's what I often do when interruptions are coming too frequently. I'll just step out of the office and work offsite, so that's how I deal with things when they get crazy."

Another manager expressed: "I feel I don't really start my, like the jobs that require sort of a concentrated effort and concentration and quiet time until 4:30 when everybody else goes home. So that time, you know I am really dealing with multi-tasking and working in several different fast-paced, easy-to-do things during the day. And I don't get to the longer project stuff until later." Another executive revealed "To get work done I'll come in around seven o'clock to give myself an hour, hour and a half of quiet time because I know no one will be here." Still another manager stated "For me interruptions are most annoying when I get one after another after another. It really makes it difficult to stay on task and get anything accomplished when you experience several interruptions back to back."

The common theme from all of the preceding quotes is the managers need more uninterrupted quiet time to attend to certain important management responsibilities and they are sometimes unable to do so because of interruptions. The immediate daily problems constantly arise, at least enough, to prevent the managers from achieving any real progress on their projects during their regular hours in their office. Many of the managers expressed how they prefer to keep an open-door policy and welcome interruptions from employees, but their comments underscore the fact that often in order to work on their higher-level, long-term duties which require thought and concentration, they find they must take action to limit the possibility of interruption by leaving the office, working earlier, working later, etc.

Are the interruptions beneficial to the manager/organization? And, no, some managers feel interruptions are not disruptive. "Well, I guess I kind of feel that it is not that big of a disruption. I've come to expect it. It doesn't bother me. So, it is generally a question and I will usually put whatever I am doing aside and discuss the problem or the situation with whoever it is. I will generally spend as much time as they need with it. Absent having to leave for a prescheduled meeting or something, I'll give them all the time that they need."

"I don't get interrupted much, but what little I do, I consider most of it to be of a business nature that I welcome." "There's good interruptions, if someone has questions, I have a new team member that's only been on board about five weeks and she's learning. And, if she has a question I want to take the time to stop and help answer her questions because she will grow and learn through those questions. So, I never want to say that don't interrupt me or don't ask me any questions. I want to be there for them and to support them and to teach people and help them grow."

How are they beneficial to the manager/organization? "They [interruptions] keep me abreast of what's going on. And so, the alternative is I shut my door or I don't let anybody come and see me and I don't want to work in a vacuum. I don't want to be inaccessible to people. If there is a problem I want to be one of the first people to know about it. So, I want people to feel comfortable to let me know. If there is a question, especially if it is coming from a customer, I never want them to wait." "They are beneficial because they are usually bringing me information that I would like to know." "…cementing or forming those informal networks to help you get projects done. Because one day you're being interrupted the next day you're interrupting."

TABLE 1
CORRELATION OF HYPOTHESES

	Per Day Data				
1	No. of Interruptions	1.000			
2	Duration (minutes)	-0.080	1.000		
3	Flow of Thought	0.281	0.164	1.000	
4	Productivity	0.359	0.440	0.560	1.000

The results in Table 1 address hypotheses one through four and show the correlations are not of a significant level. *Hypothesis 1: There is an association between the number of interruptions and the level of interference with flow of thought.* This is 0.281. *Hypothesis 2: There is an association between the number of interruptions and the level of interference with productivity.* This is 0.359. *Hypothesis 3: There is an association between the duration of interruptions and the level of interference with flow of thought.* This is 0.164. Of the four hypotheses tested, this correlation was the lowest. *Hypothesis 4: There is an association between the duration of interruptions and the level of interference with productivity.* This is 0.44. Of the four hypotheses tested, this correlation was the highest. However, the findings for hypotheses one through four are important because they elicit the possibility other variables should be considered when attempting to ascertain the determinants of the level of interference with flow of thought and productivity.

CHART 1
MEAN LEVELS OF INTERRUPTION

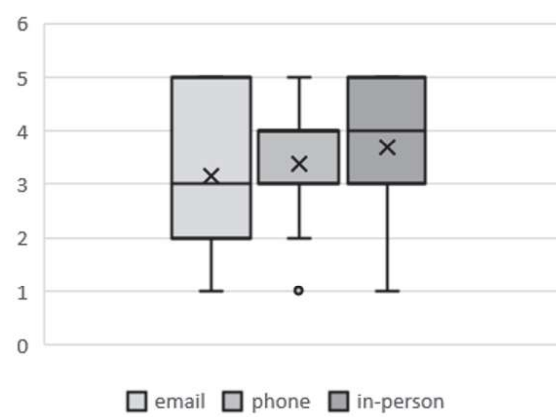

TABLE 2
ANALYSIS OF VARIANCE

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	6.459259	2	3.22963	1.902042	0.153332	3.064761
Within Groups	224.1333	132	1.69798			
Total	230.5926	134				

Hypothesis 5: The mean level of disruptiveness for all three methods of interruption is not the same. The means of the three methods are not equal. On a 0 to 5 scale, the mean for email is 3.155, telephone is 3.378, in-person was 3.689 (chart 1). However, after an analysis of variance it is noted the P-value is .1533 (table 2). This is not a significant level of difference.

DISCUSSION

To summarize the quantitative data, the correlations for hypotheses one through four were too low to be considered significant. However, this does not mean the quantitative data gathered has absolutely no value. The data clearly show interruptions are disruptive to managers. For example, the three methods: email, telephone, and in-person may not vary significantly in their means, but the data proves they are disruptive and in-person is the most so. All the means are higher than 3.0 on a 5.0 scale. In hindsight, it may have been wiser to propose a hypothesis for each method stating that the mean level of disruptiveness is greater than zero. In this case, all three hypotheses would have been proven true. The same can be said for the interference to flow of thought and interference to productivity. What may be more important to consider than if one method is more disruptive than the other is all three methods have proven to be disruptive. For the individual manager however, one method may prove to be more disruptive than the other two.

This raises a salient point concerning interruptions affecting managers at work. The situation is not as simple as when a manager receives X amount of interruptions or when the interruptions last X amount of time, then the manager experiences X amount of negative impact to his work. The human element makes the level of impact to each manager dependent upon the wherewithal of each manager. Continued research of the effect of interruption may prove more insightful if the variable of individual personality is brought into the analysis. Managers could be categorized based on personality. With the inclusion of this variable, the variables of interruption amount and interruption duration may increase in significance among managers who fit into particular personality categories.

Mangusson and Ekehammar (1975) explain individuals differ with regard to the meaning they give to the same situation. Eminent personality psychologists have extensively studied the fact that people are different. This helps to shed light on why some managers view interruptions as distractions and some do not. It also helps to explain why some managers who experience a low number of interruptions may feel severely disrupted and other managers who experience a much higher number of interruptions feel much less disrupted (Britt, Shen, Sinclair, Grossman, & Klieger, 2016).

For example, one manager in the survey answered he/she receives 15-21 interruptions per day lasting between 4-9 minutes and rated the level of interference with flow of thought at 2 on a 0 to 10 scale. Another manager who also answered he/she receives 15-21 interruptions per day lasting between 4-9 minutes rated his/her level of interference with flow of thought at 10 on a 0 to 10 scale. The individuality of these responses appears to be due to each manager's personal interpretation of what, how many, and how long, constitutes disruptiveness and how severely so.

As articulated by Mischel (1977) "For personality psychology, an especially important part of information processing concerns the ways we encode and group information from stimulus inputs . . . clearly, different persons may group and encode the same events and behaviors in different ways . . . a stimulus perceived as 'dangerous' or 'threatening' by one person may be seen as 'challenging' or 'thrilling' by the one next to him." Therefore, the subjectivity of a manager's answer to a question asking him/her to rate the level of interference or disruptiveness on a scale, prevents the phenomena from prediction by a mathematical formula consisting simply of objective data.

Reducing Unnecessary Interruptions

The nature of managerial work is to interact with people (subordinates, customers, etc.). Interruptions are widely accepted as a part of the job and can be beneficial to the manager and the organization. However, some interruptions can be seen as redundant and unnecessary. Measures could be taken to reduce these types of interruptions because analysis of the data has shown interruptions do disrupt managers to some degree, and some managers more so than others. As many of the managers stated, they are often asked for information or advice for how to handle a situation. One manager expressed his greatest frustration was an interruption where the employee should have already known how to handle a situation and had the requisite information.

Therefore, two steps in reducing unnecessary interruptions are to provide the employees with the information they need and to empower them to make decisions when they have the information. Ideally, employees should be provided with comprehensive job descriptions, proper training and information so they fully understand their positions and have the tools they need to sufficiently perform their duties. An important part of empowering an employee to make decisions is to be certain they understand they have the authority to make decisions. This would help to prevent unnecessary interruptions requesting permission to make decisions they are already empowered to make.

IMPLICATIONS

This research has provided results important to the field of management. As is the general consensus of management: it is a profession where interruptions are known and expected as part of the job, and many managers welcome these as a means to assist their employees, their organization, and their customers. However, this research also discovered that even with this understanding of the nature of the management position, managers do experience interruptions, sometimes to the extent, they are disruptive and regressive in nature. It is also sometimes necessary for managers to take action to attempt to avoid the potential for interruption in order to facilitate an environment where they can concentrate on their higher-level responsibilities which contribute to the long-term growth of their organizations. Managers feel it is necessary to take steps to avoid their employees by leaving the office, coming to work early, and/or working later to accomplish their tasks and fulfill their responsibilities.

The relevance to academics is the utility of the ERG model to understand the workings of an organization. The relevance to the practitioner shares this benefit and the knowledge gained that the typical structure of a manager's job may not be the most conducive to the effectiveness and efficiency of the manager's performance. This model helps to isolate the causes of the costly interruptions (the fulfilling of existence or relatedness needs) and increases the awareness for the possibility to ensure managers receive the necessary resources (time, periods of uninterrupted work, etc.).

CONCLUSION

"It is the loose ends with which men hang themselves."
Zelda Fitzgerald

Continued research into the viability of the ERG theory as an organization-level construct is appropriate and may prove beneficial in future management analyses. To summarize the findings of this research: interruptions have been proven to be disruptive. The level of disruptiveness may not be uniform from manager to manager and cannot be accurately predicted by the amount of interruptions one experiences or the duration of the interruptions one experiences. Some managers feel interruptions are highly disruptive to their productivity. Some managers feel interruptions are minimally disruptive to their productivity. The mean levels of disruptiveness for every measure and method are near or past the midline of their scales. This is important because a portion of the levels of disruptiveness are higher than the mean. In time, the mean levels of disruptiveness could increase. Therefore, this is a topic which deserves further investigation.

Concerning the issues raised by personality psychologists as it pertains to the variability in answers to the survey is to recognize "…people differ significantly on virtually any dimension, showing stable overall individual differences: on the whole, some people are more sociable than others, some are more open-minded, some are more punctual, and so on." (Mischel Shoda, & Smith, 2004)

To this end, it is important to remember in researching and analyzing managers that they, just like their employees, are individuals and each may perceive situations, such as interruptions, in their own way. Context, duration, and the amount of interruptions may be categories which offer quantifiable data, but the overall impact, positive and/or negative is relative to the manager experiencing them. Future research may benefit from this perspective. Controlling for the variable of personality could provide valuable insight for gaining a better understanding into what affects the levels of interference with flow of thought and productivity of managers.

In conclusion, interruptions can be regressive in nature. The survey answers show often interruptions are concerning lower-level, immediate issues such as operations and services. The interviews also provide data showing those who interrupt do so with the purpose of fulfilling a relatedness need. Interruptions are shown both in the quantitative data and the qualitative data to be beneficial to the manager and organization. They help to keep managers informed of the happenings in the organization. They also are important in guiding and mentoring the managers' subordinates. Considerations for future research may include controlling for managers' personalities, larger sample sizes, and participants from larger companies.

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