#### Informing Science: the International Journal of an Emerging Transdiscipline Volume 18, 2015

Cite as: Bouhnik, D., & Giat, Y. (2015). Information gatekeepers – Aren't we all? *Informing Science: the International Journal of an Emerging Transdiscipline, 18,* 127-144. Retrieved from http://www.inform.nu/Articles/Vol18/ISJv18p127-144Bouhnik1534.pdf

## Information Gatekeepers – Aren't We All?

Dan Bouhnik Jerusalem College of Technology, Jerusalem, Israel, and Bar Ilan University, Ramat Gan, Israel

#### Dan.Bouhnik@biu.ac.il

#### Yahel Giat Jerusalem College of Technology, Jerusalem, Israel

#### Yahel@jct.ac.il

## Abstract

In today's knowledge environment, individuals and groups who gather relevant information about the organization's external environment and distribute that information for use by their colleagues receive increasing attention and are viewed with great importance. These individuals have been named Information Gatekeepers. Thus far, researchers have not established a unanimous and interdisciplinary definition regarding the human information gatekeeper. Nonetheless, a recurrent theme in previous papers regards gatekeepers as a select few throughout the organization. This approach creates two kinds of employees based on a specific set of criteria – those who are gatekeepers and those who are not. The main goal of this research is to examine whether gate keeping is an individual attribute that exists or does not exist within the organization, or whether gate keeping is a continuous attribute that exists within every member and throughout the organization in varying intensity subject to differences in personal characteristics and other factors. We find that evidence to the existence of latter approach is significant and suggest practical recommendations that arise from these findings.

**Keywords**: Information environment, gatekeeper, organizational knowledge, organizational learning

### Introduction

Knowledge sharing amongst organization members constitutes an important discipline in information and knowledge management. An organization's information is found in forms, information pools, work processes and routines, in employees minds, and so on. The formal organiza-

tional structure and hierarchy do not necessarily reflect the information flow among the employees (McKenzie, 2005; Tushman & Katz, 1980). The organization must develop acute awareness as how to convey information among individuals and remove any barriers to its sharing, creating a routine of information sharing within the organization, on the one hand, and a routine of cultural systems that will cause information

Material published as part of this publication, either on-line or in print, is copyrighted by the Informing Science Institute. Permission to make digital or paper copy of part or all of these works for personal or classroom use is granted without fee provided that the copies are not made or distributed for profit or commercial advantage AND that copies 1) bear this notice in full and 2) give the full citation on the first page. It is permissible to abstract these works so long as credit is given. To copy in all other cases or to republish or to post on a server or to redistribute to lists requires specific permission and payment of a fee. Contact <u>Publisher@InformingScience.org</u> to request redistribution permission.

sharing to become an integral part of the day to day work culture, on the other hand (Allen, 1997; Rowley, 2003).

Information sharing does not relate only to internal organizational information. Individuals and groups who collect, filter, and distribute information relating to the environment outside the organization for use within the organization are extremely important (Klobas & McGill, 1995). These individuals are nicknamed "information gatekeepers".

The purpose of this study is to examine the manner in which the phenomenon of the human information gatekeepers is manifested in organizations with regard to the frequency and extent that it is manifested among employees. We wish to reveal if information gate keeping is characteristic only of a number of organization members or, perhaps, it is a continuous measurable characteristic that exists, in various degrees, in all members of organizations.

# **Literature Review**

## Background

Knowledge is defined as a mixture of continuous experiences, values, and information that provides an intellectual framework for information processing and for absorbing new information and experiences, or as information combined with such elements as interpretation, contexts, and reflections by means with which a decision or an action is come by (Davenport, De Long, & Beers, 1998).

Macevičiūtė and Wilson (2002) perceive information as a resource and as a consumer product. They emphasize the importance of acknowledging the need for information and for the development of abilities and methods for locating and developing information within the organization and, finally, to make intelligent use of the information.

In the course of their continuous activities, organizations constantly create new knowledge by converting and integrating personal concealed knowledge of individuals who develop ideas and creative approaches with common explicit knowledge that the organization possesses, thus creating insights, products, and innovations (Nonaka & Takeuchi, 1995).

Kari (2007) maintains that it is not enough to investigate and study the information collection processes alone, for information is not only collected for collection purposes per se. The importance of the process lays in the results that the information brings about. Kari ascribes great meaning to "information outcomes" and defines them as all that derives from the assimilation of a message or from the receipt of a message. Information outcomes may be physical or intellectual, a process or a final state, a result of the use of the information or outcomes of information influence.

## Organizational Learning

In an era of speedy and continuous changes that constitute a fundamental essence of most organizations, Argyris and Schon (1978) contend that from a comprehensive perspective, organizational learning becomes a significant field that is particularly intended to improve the organizations' performance. In their opinion, the human factor plays a central and significant part in the complex of human interaction within the group. Indeed, Bouhnik, Giat, and Sanderovitch (2009) investigated the role of organizational learning in the creation of an expert community within the organization.

Senge (1990) presents systemic thinking as one of the important elements necessary for obtaining organizational learning and for an organization to be, in essence, a learning organization. In his opinion, this approach allows a more effective understanding of the interactions within the sys-

tem, while emphasizing affinities and connections between the various components, process dynamics, prediction abilities, and problem solving abilities. The important processes of information management, systemic thinking, and organizational learning greatly rely on the search for information and its utilization. However, in the course of seeking information in the vast accessible sources quite a number of problems arise.

In order to deal with this problem, Steinerová (2001) argues that the information seeking gateways should strive to match their method of operation to the manner in which people think and behave when attempting to solve information problems. Reference to information may be realized in various manners, including face to face communication, data bases, specific interaction in the workplace, social knowledge, etcetera. The sharing of the knowledge itself may be manifested in a number of ways, among them communication, cooperation, learning, work habits, etcetera. Information specialists must deliver information, information products, and information services for problematic and special situations that users, or people who come to them, encounter. Furthermore, they must identify and determine the users' information needs and direct them to the sources that will be helpful to them while supplying an added value in the source referral process. Thus, the information specialist transforms information into knowledge in the course of interaction with the users (Steinerová, 2001).

That being the case, one of the prevalent solutions for dealing with difficulties that arise while seeking information is turning to human information sources.

#### Human Information Sources

The importance of positioning the human factor in the center of the information search process is validated by many studies that discuss the significance of human information sources. Man has always preferred to request and receive information from human sources, including friends, relatives, and coworkers. Human sources are favored and considered more important than nonhuman information sources (Aguilar, 1967; Choo, 2001; Daft, Sormunen, & Parks, 1988; Elenkov, 1997; J. L. Johnson & Kuehn, 1987).

The manner by which people choose to seek and utilize information and their use of information technologies is significantly affected by the social connections that are characterized by a system of incentives to use, organize, and share information in the workplace (Kling, 1999).

The factors that mostly affect the choice of information sources are the elementary groups that constitute the center of ones' social life and that affect his personality and opinions and become information sources in themselves. Other factors include accessibility, credibility, the ability to provide relevant and practical information, and the ability to handle large quantities of information and to filter out irrelevant information. These factors provide the human source its importance and strength as a preferred information source (Aguilar, 1967; Argyris & Schon, 1978; Durrance, Souden, Walker, & Fisher, 2006; C. A. Johnson, 2004; Lu, 2007; Macevičiūtė & Wilson, 2002; Steinerová, 2001). The human information source, in general, and the gatekeepers, specifically, have these characteristics and integrate them in their activities.

C. A. Johnsons' study (2004) revealed that 35% of subjects chose people as their chief information source, 34% chose organizations, and 27% chose the media as their first source when seeking information.

Turning to human information sources is the most common and popular solution in the quest for in information. This is not carried out within the organization alone. When seeking information one turns to human sources within and outside of the organization. When the process of seeking information outside the organization, whether active or passive, becomes routine, it is called "surveying the external environment".

## Surveying the External Environment

Organizations' main goals focus on their performance and achievements. The organizations' structure and decision making processes are affected by the complexity of the external environment and from its instability (Kourteli, 2005). For this purpose organizations utilize environmental scanning methods that, first and foremost, gather and accumulate information. This also describes a process of acquisition and utilization of information regarding events, trends, relationships, and interactions in the environment external to the organization that is meant to help the management plan the future activities of the organization (Aguilar, 1967; Choo, 2007; Choo & Auster, 1993; Correia & Wilson, 2001).

The external survey is important not only from the economic and financial aspects, but from a strategic point, as well (Kourteli, 2005). Organizations survey their external surroundings in order to understand the external forces so that they may develop effective responses to promise and improve their future. The survey of the surroundings is done in order to avoid surprises, to detect threats and opportunities, to achieve a competitive advantage, and to improve long and short term strategies (Sutton, 1988).

When the surrounding environment is perceived as difficult to analyze, the tendency to turn to human sources increases in order to minimize the measure of uncertainty.

According to Choo (2001), in today's fluctuating environment organizations find themselves faced with a dilemma. On the one hand, the environment appears to be impossible to analyze because of its complexity and tendency to change frequently. On the other hand, organizations realize that they need to actively survey their environment and its design. Some believe that the high frequency of change in the environment provides opportunities to effect its design. Organizations that want to improve their workers surrounding surveys must improve the two dimensions of environmental surveys (maintain continuous contact with the significant players in the environment, increase the workers accessibility to internal and external information, encourage workers curiosity and to deduce meaning of external developments) and of breaking out (create internal-external communication channels, encourage employees to put feelers out and to be patient with failed attempts).

The importance of surveying the surrounding environment unites its entire potential advantages, and the convenience and naturalness of turning to human sources clearly emphasize the necessity and importance of the gatekeepers' task.

## The Gatekeepers

Due to the wide dispersion of information sources in organizations, such as official forms, digital data bases, protocols, work orders, processes, norms, and knowledge located in employees' minds, organizations should develop sharp awareness to the process of transferring information from individuals and remove any obstacles that hinder sharing this information. Thus, the organization will create a routine of information sharing and cultural systems that will cause information sharing to become an integral part of the day-to-day work culture (Allen, 1977; Rowley, 2003).

Information sharing does not only concern internal information (Wilson, 1997). Of great importance are the individuals and groups who collect information regarding the organizations' surroundings, filter it, translate it into the organizations' language and distribute it for use within the organization (Klobas & McGill, 1995). These people are known as "information gatekeepers". The Miriam-Webster dictionary provides the following definition for the term "gatekeeper" ("Gatekeeper," 2009):

- 1. an entity that guards a gate
- 2. an individual who controls access

The term "gatekeepers" was first coined in 1947 by the psychologist, Kurt Lewin (1943). Lewin was researching the differences between families' eating habits. Lewin noticed that in the families that he studied the woman, or the housewives, were the ones who controlled the decision making process regarding all that concerned the families' eating habits, and they created behavioral obstacles and incentives in this context. These housewives were nicknamed "gatekeepers" in this study.

When defining the term, Lewin (1943) describes an entrance to a tunnel through a gate. The traffic within the tunnel and between the tunnel and its surroundings are controlled by the gatekeeper or gatekeepers. In other words, a piece of information must travel through the tunnel, which is controlled by the gatekeepers, cross it, and arrive at its destination (Barzilai-Nahon & Neumann, 2005). Over the years other theories developed in other fields, among them mass communication, management and technology, information science, and political science, with each theoretical field emphasizing a different part of the term and the field.

Theories in the management and technology field tend to focus mostly on the technological gatekeeper. Allen (1977) concentrated on this aspect with the added aspect of the informal gatekeepers.

This point of view was widened by Tushamn & Katz (1980), according to whom the gatekeeper is well connected in and outside of the organization.

The researchers in this field mainly focused on the development of a series of parameters meant to ease the process of identification of the technological gatekeeper. They also tried to understand how the gatekeepers affect the information flow in the organization, business transactions, and inter-organizational communication (Barzilai-Nahon, 2008; Tushman & Katz, 1980).

In the information science field the researchers tried to identify gatekeepers in social societies and to understand their role in these frameworks based on the societies' information needs. In other words, their main focus was on gatekeepers as information distributers within the community in which they reside with the hope of promoting social and cultural goals. A number of researchers even focused on the creation of obstacles to prevent the penetration of harmful information from the outside to the inside. Others in this field view gatekeepers as catalysts and focus on ways to achieve improvement and efficiency in organizations by way of agents who control the information flow (Barzilai-Nahon, 2008).

## The Filtering Role of the Gatekeeper

Most of the earliest theories that developed in the field of mass communication and journalism viewed gatekeepers as selectors or human information filters and identified them particularly as newspaper, radio, and television news editors. They ascribed to the process such terms and activities as choosing, avoiding, broadcasting, designing, presenting, and timing of the information transfer from the deliverer to the recipient (Barzilai-Nahon, 2008).

The filtering role of the gatekeeper can be appreciated through Gill's (2008) resonance model. Gill explains that it is not enough to pass on rigorous (i.e., quality) or relevant information. The information also needs to *resonate* (Gill & Bhattacherjee, 2007) with the entity to whom it is delivered. Jamieson and Hyland (2006) explain that many biases influence decision-makers as to whom they relate information and group these biases into four groups: informational, cognitive, risk, and uncertainty. Building on this bias model Gill (2008) explains that these biases are filters that can effectively eliminate resonance with the client. Loss of resonance means the information is not received well by the client, who may either disregard it, or even worse, fight against it.

## Gate Keeping – Specific Approaches

The gate keeping phenomenon has been examined and researched by many researchers, the most prominent, Allen (1977), defined the gatekeepers as a small group of key persons that are exposed to external information sources. These people constitute the core of the information networks in the organization and have many informal contacts, mainly outside of the organization, and others in the organization turn to them for information. The gatekeeper does not induce change as customarily perceived, but rather acts as an element that encourages preservation. He is not a single person, but rather a public body with collective goal but free of personal interests (Barzilai-Nahon, 2008).

Lu (2007) describes the gatekeepers' activities: reception of information, filtering of information, and finally transference of information to the members of the organization. Lu's definition is depicted in Diagram 1.

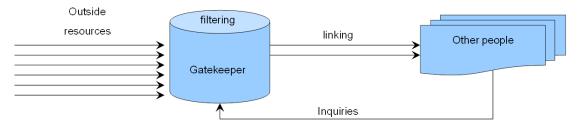


Diagram 1: Gatekeepers' activities (Lu, 2007)

According to Bhargava and Feng (2005), gatekeepers are characterized by their critical task of searching for, organizing, and prioritizing large quantities of accessible information based on their expertise. The information seeker turns to the gatekeepers in order to obtain information based on which he can consider his options, make decisions, and take action.

In her study on gatekeepers in industrial companies, Morrison (2004) ties the level of innovativeness of these companies to their ability to absorb external information. She defines the gatekeepers, similarly to Allen (1977), as a small group of people who frequently expose themselves to new external information and to whom other turn". Morrison concludes that their main activity is acquisitioning, filtering, transferring, and translating external information for members of their organization. Those in this position must have higher than average information comprehension capabilities.

Klobas and McGill (1995), in their study of gatekeepers in information technology organizations, survey various attempts to define the phenomenon and turn to many studies that were carried out in the 60's and the 70's in order to identify the gatekeepers. These studies used sociometric systems that were based on Allen's (1977) approach and mainly on the mapping of the communication channels between individuals in the organization: questioning organization members - those that are perceived as information sources and those that seek information - about their communication activities; mapping the connections between the various people; and defining the gatekeepers as members of the organization who actively collect information and distribute it to the others.

In their study, they note Holland (1972) who, in his study, defined a variable he named "information potential" (IP). This variable reflected the value of each employee as an information source in the eyes of his colleagues, based on three components: quantity, quality, and accessibility. Based on his score, each member was defined as a gatekeeper or not.

McKenzie's (2005) study on external unit managers found that the network of personal connections is the factor that has the most effect on the perception of a manager as an information

source. Other supporting factors are: personal knowledge, communication abilities, cognitive style, and capabilities. She turns to Wilson (1997), who attempted to identify the existing criteria for choosing an information source, and concluded that the main criteria is the source's credibility and how convincing he is.

Barzilai-Nehon and Neumann (2005) define gate keeping as a process of controlling information as it flows through a gate. The activities of the controller on the movement of the information includes choosing, adding, avoiding, presenting, transferring, designing, modifying, returning, timing, combining, disregarding, and deleting information.

## **Gatekeeper – Definition**

For the purposes of this study, based on the relevant research and in light of the above, we defined "gatekeepers" in the fullest and widest manner with regard to their features and characteristics: members of an organization who initiate exposure to a wide variety of external information sources in the field of their expertise or in general; who filter information, obtain information, translate information into the organizations' language, and distribute it among their colleagues with varying extent and frequency; and who testify to their possessing strategies for distributing information within the organization.

# Methodology

### **Research Procedures**

The study was carried out by the means of questionnaires for self-testimony. The questionnaire was distributed anonymously while emphasizing that the research is for academic purposes only and is not sponsored by the organization; this in order to avoid possible deviations when completing the questionnaire. The questionnaire included demographic details for statistical segmentation purposes and in order to relate to features that point to behaviors that match the definition of the gatekeeper based on the four gatekeeper variables that are derived from it. The data collection process continued from March 2012 through July 2013.

## **Research Population**

The research population included the employees of a large leading financial institution in Israel of varying demographics, diverse positions on different levels, and in various units. All told, 302 questionnaires were distributed, of which questionnaires that were not completed to the full or lacked the demographic information were screened, leaving a total of 261 complete questionnaires.

The statistical segmentation of the demographics that characterize the research population is presented at the beginning of the findings section.

## **Research Tools**

The questionnaire was developed while performing a number of observations in some of the organization's units and based on previous studies from the field that utilized questionnaires for data collection (Agada, 1999; C. A. Johnson, 2004; Klobas & McGill, 1995; Siatri, 1988). In order to check the complete compatibility of the questionnaire to the research population and for research purposes, the questionnaire was first validated by prior distribution to 14 of the research participants, in two stages (6 participants in the first stage and 8 in the second stage). Upon analysis of the participant's feedback regarding the ease and the manner of completing the form and after some discussion with them following each stage, some of the questions were edited, possible answers were added, and other corrections were made before reaching its final form.

## The Research Questions

The research question is, "Is gate keeping a characteristic that exists only among a number of the organization members or is it a continuous measurable characteristic that exists in all members of the organization in varying degrees?"

The secondary research questions that derive from the main research question are:

- a. Is the gatekeeper phenomenon rare and limited, or perhaps it may be recognized in a larger portion of the organization members than is customary to expect today?
- b. Is the intensity of the expression of the phenomenon and its characteristics affected by personal and professional factors?

From this question a number of secondary questions arise, by which we can check if differences exist among the gate keeping variables between:

- a. Men and women.
- b. Managers and employees.

### **Research Hypotheses**

The research hypotheses that are derived from the main and secondary research questions are:

- a. Gate keeping is a continuous feature. Meaning, we will not find subjects who are or are not gatekeepers, but differences will be found among the subjects in their placement on a continuous scale regarding each of the gate keeping variables and, as a result, in their general gate keeping score.
- b. Significant differences will not be found in the gate keeping variables among men and women.
- c. Significant differences will be found in the gate keeping variables among managers and employees, with the managers scoring higher.

## The Variables

#### Presentation and definition of variables

The definition that was worded in this study for the term "gatekeeper" is composed of three parts, each component describing a different aspect of the activity pattern characteristic of the gatekeeper. The variables that were chosen and that will serve to test our hypotheses embody the three parts of the definition and describe the entirety of the characteristics, features, and activities that are manifested by the gate keeper.

The variables are:

- a. comprehension of the importance of up to date information
- b. keeping updated in practice
- c. sharing and distribution of information
- d. self-testimony

From these four variables the last variable, which constitutes the average of the above four, is derived:

e. general gate keeping score

#### Comprehension of the importance of up to date information

The *comprehension of the importance of up to date information* variable relates to the first part of the gatekeeper definition: "members of an organization, who initiate exposure to a wide variety of external information sources in the field of their expertise or in general". It describes the updating patterns of the subjects from the aspect of the importance they ascribe to initiating updating and passively being updated of new and relevant professional information. It also relates to the frequency of his updating and to the importance the subject attributes to various information channels. This variable describes the first activities in the cyclic process of gate keeping, in other words, exposure to information and its collection.

This variable partially appears in Klobas and McGill's (1995) work, which examines the importance the questions ascribe to various information channels, so as to classify them as gate-keepers or not. In Klobas and McGill's work, the gatekeepers where characterized by attributing great importance to information channels.

This variable is similar to the information filters of the resonance model (Gill, 2008; Jamieson & Hyland, 2006), which serve as "mechanisms that modify incoming information to align it with existing client preferences" (Gill & Cohen, 2008, p. 159).

#### Keeping updated in practice

The *keeping updated in practice* variable complements the reference to the first part of the definition: "members of an organization, who initiate exposure to a wide variety of external information sources in the field of their expertise or in general". It describes the actual patterns of the subjects updating practices based on the use they made of various information channels in the past three months. This variable incorporates the various information and media channels to which the gatekeepers are exposed actively and passively.

This variable appears partially in Klobas and McGill's (1995) work as well, as they examine the number and the variety of information channels the subjects turn to, so as to classify them as gatekeepers or not. In Klobas and McGill's work, the gatekeepers were characterized by turning to a wide variety of information channels.

This variable is crucial to ensuring the relevance of information (Gill, 2008) to the receiver of the information.

### Sharing and distribution of information

The *sharing and distribution of information* variable relates to the second part of the gatekeeper definition: "who filter information, obtain information, translate information into the organizations' language and distribute it among their colleagues with varying extent and frequency". It describes the sharing and distribution patterns of the subjects, while examining their sharing and distribution activities of newly acquired information, the frequency, the scope (based on the number of recipients), the importance the subject relates to the sharing and the reasons for which he shares the new information with his colleagues. This variable describes the next stage in the cyclic process of the gatekeeper's activities, meaning, filtering, sharing and distribution of information.

This variable is related to the filtering literature in two ways. First, to overcome problems related to the attention filter of Gill (2008), sharing and distributing information serves as a means to make sure information is not ignored by the receiver. Second, the gatekeeper now functions as a channeling filter, routing information to the relevant targets.

#### Self-testimony

The *self-testimony* variable relates to the final part of the gatekeeper definition: "and who testifies to his possessing strategies for distributing information within the organization". It describes the self-recognition of the subject as a gatekeeper (even if he himself does not define it in these words), while examining the extent to which the subject agrees to his compatibility to the definition of a gatekeeper as defined in this study, and how often colleagues turn to him and the reasons behind them doing so according to his understanding

This variable is also appears partially in Klobas and McGill's (1995) study when using subjects' self-testimony regarding their sharing and distribution behaviors, so as to classify them as gate-keepers or not.

The motivation and visceral filters of Gill (2008) share features with the self-testimony variable. The common theme is the ability of the information to alter intrinsic behavior, having a profound effect on the mental attitude towards the information, and the implications of that knowledge.

#### General gate keeping score

The *general gate keeping score* variable is composed of the four gate keeping variables as detailed above. This variable describes the intensity of the expression of the gate keeping phenomenon as a whole in each subject and is calculated as the average of all four gate keeping variables (whilst translating the updating in practice variable measurements from 0 and 1 to values between 1 and 5).

## **Findings**

### Sample Population Depiction

The sample population included 261 subjects of various personal features that are expressed by a number of factors examined in the study. Table 1 describes the segmentation of the statistical data of all the subjects who participated in the study.

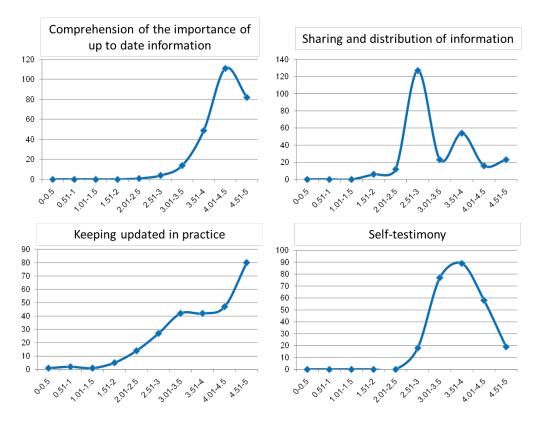
Table 1: Segmentation of job positions							
	Men						
Position	Number	Percentage	General per- centage of men	Number	Percentage	General percentage of women	Total
Professional employee	56	26.92%		152	73.08%		208
Junior manager	17	36.17%	29.88%	30	63.83%	70.12%	47
Senior manager	5	83.33%		1	16.67%		6

## Findings of the First Research Hypothesis

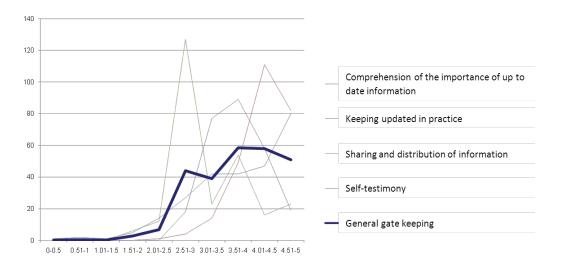
The hypothesis is that gate keeping is a continuous feature. In other words, we will not find subjects who only are or are not gatekeepers, but differences will be found among the subjects in their placement on a continuous scale regarding each of the gate keeping variables and, as a result, in their general gate keeping score.

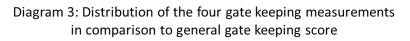
Diagram 2 presents the distribution of the subjects' scores relating each of the four gate keeping variables. Diagram 3 presents the distribution of the subjects' scores with regard to the general gate keeping variable in comparison to the four individual variables.

Diagrams 2 and 3 indicate that the distribution of the various gate keeping measurements and, as a derivative, that of the general gate keeping variable is neither dichotomous nor bi-polar, but rather appears to be a continuous distribution across a sequence of values. Thus, the first hypothesis is validated.



#### Diagram 2: Distribution of the various gate keeping measurements





## Findings of the Second Research Hypothesis

The hypothesis is that significant differences will not be found in the gate keeping variables between men and women.

In order to examine this hypothesis four T tests were carried out on independent samples. Table 2 presents the averages of the variables, their statistic deviation and the significance of the differences among the variables between men and women.

Table 2: Differences in the research variables among men and women							
	Men (n=78)		Women (n=183)		Т	Levene's	
The variable	Average	Standard deviation	Average	Standard deviation	(df=259)	Test	
Comprehension of the importance of up to date infor- mation	3.99**	0.51	4.20**	0.51	2.999	1200***	
Keeping updated in practice	0.72*	0.18	0.78*	0.17	2.519	832***	
Sharing and distri- bution of infor- mation	3.33	0.81	3.31	0.7	0.189	4.94*	
Self-testimony	3.88	0.49	3.92	0.44	0.709	52***	

\* P<0.05 \*\* P<0.01 \*\*\* P<0.001

The findings detailed in Table 2 indicate that the second research hypothesis is partially validated. The data shows that a significant difference exists between men and women with regard to the importance they ascribe to keeping up to date and in their actual doing so, with women attributing more importance to keeping updated than men and in actuality do so more often than men. On the other hand, no significant differences were found in the self-testimony variable and in the sharing and distributing variable.

## Findings of the Third Research Hypothesis

The research hypothesis is that significant differences will be found in the gate keeping variables between managers and employees, with the managers scoring higher.

In order to examine this hypothesis four T tests were carried out on independent samples. Table 3 presents the averages of the variables, their statistic deviation, and the significance of the differences among the variables between managers and employees.

Table 3: Differences in the research variables among managers and employees							
	Employees (n=208)		Managers (n=53)		Т	Levene's	
The variable	Average	Standard deviation	Average	Standard deviation	(df=259)	Test	
Comprehension of the importance of up to date information	4.15	0.5	4.07	0.56	1.1014	124***	
Keeping updated in practice	0.78*	0.17	0.71*	0.19	2.372	825***	
Sharing and distribu- tion of information	3.19***	0.64	3.82***	0.85	5.889	3835***	
Self-testimony	3.86**	0.43	4.08**	0.51	3.125	1190***	
* P<0.05 ** P<0.01 *** P<0.001							

The findings detailed in Table 3 indicate that the third research hypothesis is partially validated. The data shows that significant differences exist between managers and employees with regard to the self-testimony variable, the sharing and distribution variable, and the keeping updated variable. The managers scored higher in the self-testimony variable and in the sharing and distribution variable, however the employees ranked higher in the actual keeping up to date variable.

No significant differences were found in the importance that the groups ascribed to the necessity to keep updated.

# The Effect of Personal Characteristics on the Gate Keeping Variables

Table 4 summarizes the effects of the subjects' personal characteristics on the four gate keeping variables and on the significance of the connections between them.

Table 4: Personal characteristics effect on the gate keeping variables					
The variable	Gender	Position			
Comprehension of the importance of up to date infor- mation	**	-			
Keeping updated in practice	*	*			
Sharing and distribution of information	-	***			
Self-testimony	-	**			
- P>0.05 * P<0.05 ** P<0.01 *** P<0.00	1				

The findings presented in Table 4 show that the gender, age, position, and seniority of the subject in the organization affect the gate keeping variables, whereas the level of education and seniority in the position do not have a direct effect.

# Discussion

## Discussion of the First Hypothesis Findings

The hypothesis is that gate keeping is a continuous feature. In other words, we will not find subjects who only are or are not gatekeepers, but differences will be found among the subjects in their placement on a continuous scale regarding each of the gate keeping variables and, as a result, in their general gate keeping score.

The findings in Diagrams 2 and 3 validate the first hypothesis. The artificial division of the subjects as gatekeepers or not gatekeepers based on their compatibility to specific rigid criteria is just that – artificial. It is possible, even desirable, to view the members of the organization from a continuous, rather than bi-polar, point of view and to recognize that differences exist in the intensity in which the gatekeeper variables are expressed among the members of the organization.

A point that stands out in the aforementioned diagrams is that few subjects received very low scores in the various gate keeping variables. This may be related to the fact that the data was collected by the subjective self-testimony of the subjects, who may be reluctant, to some degree, to give themselves a 'zero' score. Thus, the minimal values of the variables may actually be above zero.

The findings exhibited in the existing professional literature in this field, as presented in this paper do not correspond with the evidence that we are discussing. Researchers who discussed and examined this subject, such as Allen (1977), Tushman & Katz (1980), Morisson (2004), and Klobas and McGill (1995), tend to view the human gatekeepers as a small and limited group of individuals within an organization, thus dividing the members of the organization into gatekeepers and non-gatekeepers. In other words, these researchers view the gate keeping characteristic as a dichotomous characteristic, which either is present or is not present in any given organization member, and not as a continuous feature that is expressed by all members of the group in various strengths. Although Holland (1972) attempts to grade employees gate keeping potential, he ultimately used this score to define each person as a gatekeeper or not, rather than rate each employees on a continuous gate keeping scale.

## Discussion of the Second Hypothesis Findings

The hypothesis is that *significant differences will not be found in the gate keeping variables among men and women.* 

The findings presented in Table 2 partially refute our second hypothesis as they show significant differences between men and women in two out of the four gate keeping variables. The findings show that women relate more importance to maintaining updated information than men and, in practice, do keep themselves updated more than men. On the other hand, significant differences were not found between the genders regarding the self-testimony variable and the information sharing & distribution variable. It is interesting to note that previous studies did not refer to gender differences at all with regard to the gate keeping issue.

### Discussion of the Third Hypothesis Findings

The hypothesis is that *significant differences will be found in the gate keeping variables among managers and employees, with the managers scoring higher.* 

The findings presented in Table 3 partially refute our third hypothesis. We find that the group of managers scored higher on the self-testimony and the sharing and distribution variables, whereas the employees ranked higher in the keeping updated in practice variable. Regarding the comprehension of the importance of keeping up to date, significant differences were not found between the two groups.

By virtue of their position in the managerial hierarchy of the organization and their control over a varying number of employees, it is logical to assume that the sharing and distribution variable will be manifested in this group more dominantly, since providing subordinates with up-to-date relevant information helps them to succeed, managers who do this contribute to their own success indirectly.

The managerial group was found prominent in the self-testimony variable as well. Managers, who due to their position, are used to people turning to them regarding professional issues and who view themselves as central players in the problem solving process within the organization, apparently are more aware of their functioning in accordance with the gate keeper variables.

Furthermore, organizational management relates great importance to information and information management. As a result, it is safe to assume that the various managers on the managerial ladder adopt this focus and integrate it in their attitude and managerial efforts. In light of this emphasis of the managers, it is very possible that the employees adopt the importance of the issue and recognize their managers expectations from them, thus they are encouraged to put it to practice and actually keep updated even more than their superiors.

We can find a reference to functioning of mangers as human gate keepers in McKenzie's research (McKenzie, 2005). However, it is evident from the existing research and literature that the differences between managers and employees have not been previously examined.

## **Summary and Conclusions**

The literature survey and our findings bring us to two conclusions:

1. In light of the limited perspective of the human information gate keeper in the existing literature and in light of our findings, it is evident that a need exists for the development of a new broader model that will describe the gate keepers' function and features, while removing the limitation on the scope of the gate keepers within the organization.

2. Recognition of the fact that we all function as gate keepers in various circumstances, on different subjects, among various colleagues, and with changing intensity, subjects the organization to the possibility of recruiting the potentially endless amount of information that is hidden within this recognition.

In light of the results of our research a number of practical recommendations arise:

- 1. It is important to create routines in the workplace that encourage information sharing among all employees. For example, it is important to give even lower level staff members in department meetings the opportunity to share new and relevant information that they have encountered.
- 2. Expanding the participation of employees in courses and conferences will enhance their information collection abilities.
- 3. Strengthening the personal connections within the organization by organizing team building activities. This is important because a great deal of information is conveyed in informal situations, thus social relationships may encourage information sharing and mutual cooperation.

Our study was conducted in an Israeli financial institution. Information processing methods may vary in different types of organizations or in other geographical areas, thus possibly affecting the results. Furthermore, the information that was collected was based on the self-testimony of the participants. Such testimony is subjective and may be biased.

These limitations therefore warrant further research. For example, it would be interesting to supplement our research with a different methodology, such that would contrast subjective reporting by participants and more objective measures. Additionally, it would be very interesting to examine the effect of the implementation of our recommendations on the organization's financial performance.

## References

- Agada, J. (1999). Inner-city gatekeepers: An exploratory survey of their information use environment. *Journal of the American Society for Information Science*, 50(1), 74-85.
- Aguilar, F. J. (1967). Scanning the business environment. New York, NY: Macmillan Co.
- Allen, T. J. (1977). Managing the flows of technology: Technology transfer and the dissemination of technology information within the R&D organization. Mass: MIT Press.
- Argyris, C., & Schon, D. (1978). Organizational learning: A theory of action approach. Reading, MA: Addison Wesley.
- Barzilai-Nahon, K. (2008). Toward a theory of network gate keeping: A framework for exploring information control. *Journal of the American Information Science and Technology*, 59(9), 1-20.
- Barzilai-Nahon, K., & Neumann, S. (2005). *Gate keeping in networks: A meta-theoretical framework for exploring information control*. Paper presented at the Journal of Association of Information Systems Sponsored Theory Development Workshop in ICIS, Las Vegas.
- Bhargava, H. K., & Feng, J. (2005). *Recommendation bias in information gatekeepers*. Working paper, University of California Davis.
- Bouhnik, D., Giat, Y., & Sanderovitch, Y. (2009). Asynchronous learning sources in a high-tech organization. *Journal of Workplace Learning*, 21(5), 416-430.
- Choo, C. W. (2001). Environmental scanning as information seeking and organizational learning. *Information Research*, 7(1), paper 112.

- Choo, C. W. (2007). Information seeking in organizations: Epistemic contexts and contests. *Information Research*, *12*(2), paper 298.
- Choo, C. W., & Auster, E. (1993). Environmental scanning: Acquisition and use of information by managers. (Electronic version). *Annual Review of Information Science and Technology*, 28, 279-314.
- Correia, Z., & Wilson, T. D. (2001). Factors influencing environmental scanning in the organizational context. *Information Research*, 7(1), paper 121.
- Daft, R. L., Sormunen, L., & Parks, D. (1988). Chief executive scanning, environmental characteristics, and company performance: An empirical study. *Strategic Management Journal*, 9(2), 123-139.
- Davenport, T. H., De Long, D. H., & Beers, M. C. (1998). Successful knowledge management projects. MIT Sloan Management Review, 39(2) 43-57.
- Durrance, J. C., Souden, M., Walker, D., & Fisher, K. E. (2006). Community problem-solving framed as a distributed information use environment: Bridging research and practice. *Information Research*, 11(4), paper 262.
- Elenkov, D. S. (1997). Strategic uncertainty and environmental scanning: The case for institutional influences on scanning behavior. *Strategic Management Journal*, 18(4), 287-302.
- Gatekeeper. (2009). In *Miriam-Webster online dictionary*. Retrieved 26 June, 2009 from <a href="http://www3.merriam-webster.com/opendictionary/">http://www3.merriam-webster.com/opendictionary/</a>
- Gill, T. G. (2008). The single client resonance model: Beyond rigor and relevance. *Informing Science: the International Journal of an Emerging Transdiscipline*, 11, 281-310. Retrieved from <a href="http://www.inform.nu/Articles/Vol11/ISJv11p281-310Gill222.pdf">http://www.inform.nu/Articles/Vol11/ISJv11p281-310Gill222.pdf</a>
- Gill, T. G., & Bhatacherjee, A. (2007). The informing sciences at a crossroads: The role of the client. Informing Science: the International Journal of an Emerging Transdiscipline, 10, 17-39. Retrieved from http://www.inform.nu/Articles/Vol10/ISJv10p017-039Gill317.pdf
- Gill, T. G., & Cohen, E. (2008). Research themes in complex informing. Informing Science: the International Journal of an Emerging Transdiscipline, 11, 147-164. Retrieved from <u>http://www.inform.nu/Articles/Vol11/ISJv11p147-164GillIntro.pdf</u>
- Holland, W. E. (1972). Information potential: A concept of the importance of information sources in a research and development environment. *Journal of Communication*, 22(2), 159-173.
- Jamieson, K., & Hyland, P. (2006). Good intuition or fear and uncertainty: The effects of bias on information systems selection decisions. *Informing Science: the International Journal of an Emerging Transdiscipline*, 9, 49-69. Retrieved from <u>http://www.inform.nu/Articles/Vol9/v9p049-</u> 069Jamieson60.pdf
- Johnson, J. L. & Kuehn, R. (1987). The small business owner/manager's search for external information. *Journal of Small Business Management*, 25(3), 53-68.
- Johnson, C. A. (2004). Choosing people: The role of social capital in information seeking behavior. *Information Research*, 10(1), paper 201.
- Kari, J. (2007). Conceptualizing the personal outcomes of information. *Information Research*, 12(2), paper 292.
- Kling, R. (1999). What is social informatics and why does it matter? D-Lib Magazine, 5(1).
- Klobas, J. E., & McGill, T. (1995). Identification of technological gatekeepers in the information technology profession. *Journal of the American Society for Information Science*, 46(8), 581-589.
- Kourteli, L. (2005). Scanning the business external environment for information: Evidence from Greece. *Information Research*, 11(1), paper 242.
- Lewin, K. (1943). Forces behind food habits and methods of change. In: *The problem of Changing Food Habits. Report of the Committee on Food Habits* (pp. 35-65). Washington, DC: National Academy of Sciences.

- Lu, Y. (2007). The human in human information acquisition: Understanding gatekeeping and proposing new directions in scholarship. *Library & Information Science Research, 29*, 103-123.
- Macevičiūtė, E., & Wilson, T. D. (2002). The development of the information management research area. *Information Research*, 7(3), paper 133.
- McKenzie, M. L. (2005). Managers look to the social network to seek information. *Information Research*, *10*(2), paper 216.
- Morrison, A. (2004). *Gatekeepers of knowledge within industrial districts: Who they are, how they interact.* Paper presented at the 44th Congress on Proximity Economics: Proximity, Networks and Co-Ordination, Marseille, France.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York, NY: Oxford University Press.
- Rowley, J. (2003). Knowledge management The new librarianship? From custodians of history to gate-keepers of the future. *Library Management, 24*, 433-440.
- Peter, S. (1990). *The fifth discipline. The Art & Practice of Learning Organization*. Doupleday Currence, New York.
- Siatri, R. (1998). Information seeking in electronic environment: A comparative investigation among computer scientists in British and Greek Universities. *Information Research*, 4(2), 4-2.
- Steinerová, J. (2001). Human issues of library and information work. Information Research, 6(2).
- Sutton, H. (1988). Competitive intelligence. New York, NY: The Conference Board.
- Tushman, M., & Katz, R. (1980). External communication and project performance: An investigation into the role of gatekeepers. *Management Science*, 26, 1071-1085.
- Wilson, T. D (1997). Information management. In J. Feather & P. Sturges (Eds.), *International encyclopedia of information and library science* (2nd ed.) (pp. 187-196). London: Routledge.





**Dr. Dan Bouhnik** is a faculty member in the Information Science department in Bar Ilan University (BIU) and in the Computer Science department in the Jerusalem College of Technology (JCT) in Israel. He is the author of a number of books used for teaching Advanced Computer Sciences and his professional interests include virtual learning and its effect on the thinking process, information needs of special groups as well as the infusion of new technologies in the learning environment



**Dr. Yahel Giat** is a tenured faculty member in the Department of Industrial Engineering and Management in the Jerusalem College of Technology. He holds a Ph.D. and an MSc. in Industrial Engineering from the Georgia Institute of Technology, an MSc. in Economics, a B.Sc. in Electrical Engineering and B.A. in Computer Sciences from the Israel Institute of Technology.