



# Study on the characteristics of security and cognitive composition through internet information

ChangJin Koo<sup>1\*</sup>, JeongYeon Kim<sup>2</sup>

<sup>1</sup> R&D Planning, Fasoo.com, Seoul, Korea

<sup>2</sup> Department of Business Administration, Sangmyung University, Seoul, Korea

\*Corresponding author E-mail: [ycjkoo@fasoo.com](mailto:ycjkoo@fasoo.com)

## Abstract

With the increasing ease in which individuals are able to obtain information as a result of the spread of personal networks such as SNS alongside more traditional networks of TV and newspapers, it has become difficult to decipher reliable sources from the unreliable. Yet, when it comes to the question of oversharing information, thus possible data leakage, the question of how individual consumers choose their news sources arises. This paper is interested in building a possible cognitive structure when it comes to how an individual perceives the information from different web platforms.

**Keywords:** Information selection; Information security; Internet; Media platforms.

## 1. Introduction

### a) Research Background and Purpose

With the increasing ease in which news related contents are dispersed across the web, privatized networks and newly formed information channels have become important in news consumption. As a result, there exists a heightened concern about the spread of falsified data as well as information leaks. Regardless of such concerns, any online-based media user can independently decide and consume his own choice of media, such actions being enabled by the plethora of platforms emerging today. Therefore, many researches are being conducted in order to analyze the effects a consumer's choice may have on his thought process.

In this research, we will present users with articles targeting socially impactful policy derived from the same search engine results to record how each user reacts to the different takes on the same topic. Through this, the paper will suggest how an individual selects his news feed.

## 2. Theoretical background

Previous research suggest that people have a tendency to use a heuristic approach in order to simplify the incoming of new information by filtering it through past experiences. In other words, one creates his own subjective criteria in judging any item at hand [1]. Accordingly, such an approach calls for an individual to rate incoming information according, disregarding aspects that are deemed to hold little importance to the individual in question, going through a process of abduction [2].

With the increased ease in which the internet provides consumers with convenient accessibility, openness, and interactive nature of the web, any individual information consumer is exposed to a plethora of data that may or may not be true. As a result, the heuristic approach taken is through categorizing the vast amount of media sources through the credibility and reliability of the source

as well as taking into account possible social influences [3]. This includes the number of referrals a possible source may gain, or simply adhering to a preferred site or method to get one's information from.

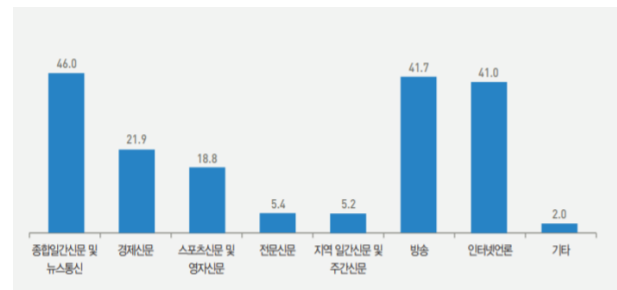


Fig. 1: Preferred Social Media Platforms (in percentage, N=2,313) [4].

From left to right translation:

Comprehensive daily newspaper, economic newspaper, sports news & news in English, area-centric daily newspaper, broadcast, internet press, others.

## 3. Research design

As examined through prior research, consumers tend to be influenced by those around an individual. In other words, a heuristic approach is taken. However, for social or politically influenced issues, there is a possibility that the actual content of the issue at hand matters more so than the perceived importance the news.

By interviewing select people (the subjects) with questions derived from previous research experience, we aim to analyze whether a media's arrangement, source, social hype of the issue, or an individual's own interest regarding the subject most affects an individual's consumption choice.

This research uses the repertory grid technique interview style to analyze the results. The search engine selected is the commonly

used google service, with the keywords being “official”, “reinforcement”, and “debt.” Furthermore, in order to decrease possible deviations occurring due to varying information distribution channels and information utilization, we have selected participants from office workers working in IT or media related fields. Under this guideline, two women in their twenties and thirties, alongside five men in their thirties and forties were interviewed to obtain an analysis.

#### 4. Research result

From the participants interviewed, a cognitive structure based on the information a selected media structure portrays and the platform it resides in was built. The categorizations that impacted the interviews can be seen with Graph I.

**Table 1:** Categorization of News Outlets

Main category	Sub-category
Information Relayed	The position of the piece in question
	Objectiveness of the piece
	The difficulty of the piece
Method of Transmission	The title of the piece
	Media representation
	The reliability of the source

The interviewees commented on how images and videos aided in their interest of the keywords, thus the source of media itself. They also noted the skewedness in the various sources, commenting on how, despite providing objective information, the differing pieces left out parts of the truth in order to support the opinions present in the works.

When asked to rate how the different sources are rated on a seven-point system, we arrived with Graph II.

**Table 2:** Repertory Grid of Experiment

	A	B	C	D	E	F	G	
Objective information included	3	5	7	5	5	6	3	Subjectively driven piece
Easily understood	-	3	5	3	3	3	5	Difficult to understand
Eye-catching title	5	6	3	5	5	5	3	Mundane title
Usage of images or videos	3	3	2	3	-	1	6	No image of video used
Reliable source	5	5	7	1	5	6	7	Unknown source

Here, we find that the interviewees did not take major note of the reliability of the information within a piece, choosing instead to focus more so on the title and the body of the source in question. As the responses to the questions at hand were similar across the board, creating a more detailed list of categories for a follow-up interview seems to be the most reasonable route to take at this point of time.

#### 5. Conclusion

This study is based on the theoretical grounds of the possible of cognitive elaboration presented in different individuals when regarding the same information through various media platforms through interviews based on the repertory grid method. The interviews reflected the following: for sensitive social topics, an individual is more likely to focus on the title of a piece alongside any visual representations that may aid in one’s understanding of the issue more so than the commonly cited importance of considering the reliability of a source when it comes to online resources. Noting how the interviewees tended to disregard the origins of the source, it may be of importance to further delve into the possible relations between the explosive growth of available online information, information leakages, and information security.

#### References

- [1] Jakob Nielsen and Rolf Molich. 1990. “Heuristic evaluation of user interfaces”. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '90), Jane Carrasco Chew and John Whiteside (Eds.). ACM, New York, NY, USA, 249-256
- [2] Magnani L. (2015) “Are Heuristics Knowledge-Enhancing? Abduction, Models, and Fictions in Science.” In: Ippoliti E. (eds) Heuristic Reasoning. Studies in Applied Philosophy, Epistemology and Rational Ethics, vol 16. Springer, Cham.
- [3] JungAe Yang. “Political Knowledge Gaps Among News Consumers with Different News Media Repertoires across Multiple Platforms.” International Journal of Communications. vol 8. Pp. 597-627. USC Annenberg Press. 2014.
- [4] Weegun Kim, SeungChan Yang. “소셜미디어 통한 뉴스 이용의 일상화 확인”. 신문과 방송. January edition. 2017.