Analysis of public and private domain concepts and personal information in cyberspace

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Abstract : The purpose of this study is to empirically examine the high reality of the inattentive behavior paid to the disclosure of personal information due to the domain characteristics of social network services (SNS), which is a form of 'mediated publics'. As a result of analyzing the concept of public/private domains Naver and Facebook on 106 university students, and revealing the details of their personal information disclosure behavior, it was found that the personal information on Facebook, which is recognized as a private domain as opposed to that on Naver, are widely open to the public.

Keywords: Public and Private Domain, Personal Information , Social Network Services (SNS)

I.   INTRODUCTION

Today, the Internet is a big part of our lives. Cyber space is used not only for simple web surfing, but also for publishing articles and photos pertaining to our personal privacy. As such, cyber space is becoming an everyday space, and a communication space beyond just a simple virtual space. As a result, the amount of personal information that is shared voluntarily and other ways will likely lead to the disclosure of unwanted degrees of our personal information.

In this study, it is noted that personal information disclosure behavior is determined by 'disclosure', irrespective of the regional characteristics of cyberspace. In other words, the space where public communication takes place is called the public domain, and the private information that is open to the public can be utilized through it. The space where private communication frequently occurs is referred to as the private domain, and the private information disclosed in this domain can not be utilized. Classification is determined by whether it is open to the public or not.

However, those who use cyberspace believe that the range of disclosure of personal information differs according to the nature of the communication in question. For example, in social network services (SNS), which are considered to be a user's personal use distinction, indirect personal information such as an individual's name, sex, date of birth, and other personal information such as hobbies and club activities are relatively easily disclosed. On the other hand, portal sites tend to be more social and open areas than other sites, and they are more reluctant to reveal their personal information on them. Due to the difference in various user 's perceptions, large amounts of personal information on SNSs may be collected and used as data for the marketing purposes of the SNS provider, or of third parties.

Therefore, this study will examine the perception of cyberspace from this perspective, and discuss the current state of personal information disclosure for university students in their twenties who are using the internet actively.

In Chapter 2, the characteristics of cyberspace are divided into the public domain and the private domain, and the concepts therein are explained. In Chapter 3, the results of the perception survey on the cyberspace used by university students in their twenties are analyzed. Finally, Section 4 concludes that the risk of disclosure of personal information on a SNS is described based on the results of this study.

II.   THEORETICAL DISCUSSION

The conceptual definition and the division of the public domain and the private domain are discussed from various perspectives. Public and private are said to be dichotomous social relations that presuppose the separation between socialized labor or the domain of work or political activity and family [2], and that the public criteria are 'closely related' '. 'Private' refers to 'intimacy related', which is regarded as a means of shelter and protection such as the family or home [4]. In addition, public standards can be viewed as "open, exposure,

or accessible spaces" in terms of space, personal items that are hidden from space, "hidden" And that it belongs only to individuals [7].

In summary, the public domain can be divided into 'a common space open to everyone and open to the public', and a 'private domain' to 'a domain that has its own unique experience'. However, there is much controversy as to whether these standards are applicable in cyberspace. Particularly on SNSs, it is seen as a public domain by the characteristics of sharing and sharing information with each other at the same time over the limitations of spreading power, diffusion, as well as time and space. However, under the theme of freedom of expression, information sharing is seen as the most basic and personal activity that is claimed to be part of a private domain. In this way, the SNS can be conceptualized as a form of 'mediated publics' because it has characteristics of both domains. A mediated public domain is a public domain where many people can interact based on intermediate mediation techniques [1]. Unlike traditional forms of a public domain, the characteristics of only the public domain are persistence, search ability, reproducibility, and having an invisible audience. Searchability means that information can be easily found with only a few keywords, and reproducibility is where one can easily copy digital information to another location. The characteristics mentioned above are when the user expresses his / her state. Therefore, there is another characteristic; that of the invisible audience. In other words, although a SNS is likely to be recognized as a private domain, personal information is revealed to the public domain.

In this study, a SNS can be regarded as an open-minded area where anyone can easily access information, not just an individual communication area that many users are aware of.

III. EMPIRICAL ANALYSIS

3.1. Survey overview

In this study, we investigate and analyze the perception of personal information disclosure scope according to the cyberspace characteristics of Naver and Facebook. Naver [3], a portal site with 81.5% of the domestic market share of South Korea, and Facebook [5], a SNS used by 88.8% of domestic internet users, were surveyed and their data was collected. The survey subjects were 20 male and female college students with experience using Naver (portal site) and Facebook (SNS) within one month.

The survey of the users' perceptions according to the characteristics of cyberspace was conducted on May 8th, 2017. The questionnaires were structured around personal information common to both Naver and Facebook, and were divided into categories of profile information, personal interests, social interests, and posts.

Table 1. Gender distribution of subjects

Gender	The number of people in the sample group	Composition ratio(%)
Female	62	58.5
Male	44	41.5
Sum	106	100.0

This body of research starts from the following research questions and seeks to grasp the user's perception according to the type of cyber service, and the extent of the disclosure of personal information by public and private areas.

Research problem 1. Is there a difference in the perception of forms of cyberspace (public domain or private domain)?

Research problem 2. Are there any differences in the disclosure of personal information due to how cyberspace is recognized?

3.2. Survey analysis and results

3.2.1. Differences in area recognition for cyberspace

First, we tried to understand how users perceived cyberspace. In this regard, it is the same cyber space, but the nature of communication is distinguished from other portal sites and SNS. This is because users can most clearly recognize the differences in perception.

We have grasped the spatial perception of Facebook with Naver as a basic service of information sharing, and distribution as the basic service of social relationship formation and exchange. We considered each site as a private area or a public area based on a 7 point scale. On the 7-point scale, the closer to 1, the more a complete public domain the site is, and the closer to 7, the more a complete private domain.

According to the survey results, respondents who think that Naver is a private domain are somewhat low in number (18.9%), while respondents who think that Naver is public domain are 65.1% (average 2.20) or more. On the other hand, respondents who think that Facebook is a public domain are relatively low (24.5%), whereas respondents who think that they are private totaled 66.1% (average 6.10) (See Fig 1.).

Fig 1. Recognition of public domains and private domains in Naver and Facebook
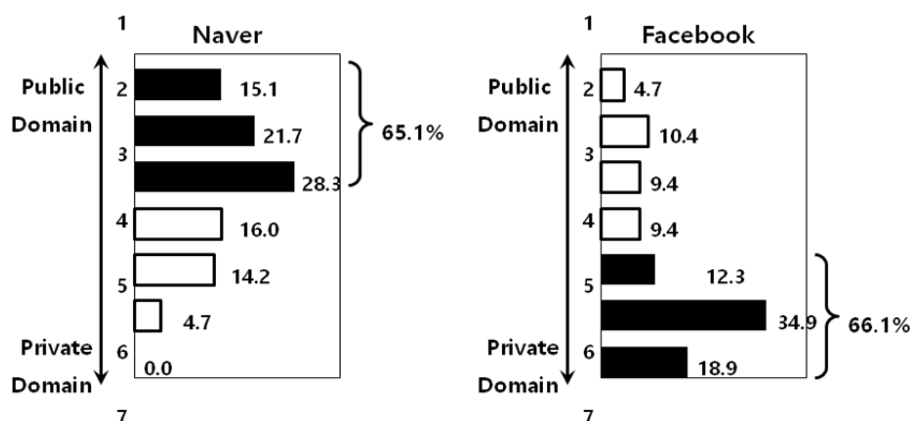
3.2.2. Disclosure of personal information according to the recognition of cyberspace

In each of Naver and Facebook we investigated the profile information, personal daily life, personal interests, social interests, recommendation / disapproval buttons, and Facebook "like" button clicks.

As a result of the research, 30.6% of users disclosed personal information on Naver, but 55.6% of users disclose personal information on Facebook, showing that the ratio of the disclosure of information on Facebook was about twice as high. Specifically, Naver revealed that the information was disclosed at a rate of 46.2% in profile, 36.8% in personal interests, 27.4% in personal daily life, 27.4% in recommendation / rejection, and 15.1% in terms of social interest. On Facebook, 79.2% of the profile, 65.1% of the personal daily life, 59.4% of the personal interest, 50.9% of the liked button click, and 23.6% of the social interest were in order(See Table 2.).

67.9% of Naver users and 62.3% of Facebook users had chosen not to post social interest items, and a majority of respondents tended to be reluctant to comment on political and social issues.

Collectively, users are more likely to disclose their information on the Facebook platform, which they perceive as a private area, more so than Naver, which is recognized as a public domain. In terms of social interest, we can see that both sites do not publish anything at all.

Table 2. Ratio of the personal information disclosure in Naver and Facebook

Personal Information	Naver	Facebook
Profile information (name, phone number, etc.)	46.2%	79.2%
Personal daily life (daily work, mood, etc.)	27.4%	65.1%
Show personal interests (club activities, hobbies, etc.)	36.8%	59.4%
Social concerns (political opinions, social issues, etc.)	15.1%	23.6%
Comments / Comments	27.4%	50.9%

IV.   CONCLUSION

With the development of the Internet and the activation of cyberspace, many people have recognized SNSs as their own personal communication space. However, a SNS is closer to a public domain, rather than that of a complete private domain because its structure and functions are very open and based on sharing behavior. In particular, since the rate of spreading is very fast, and there are few devices that can control others, many entertainers or celebrities write their articles on their personal SNS accounts, and the wavelengths produced become large, or problems frequently occur.

The current number of SNS users is one third of the world's population, which accounts for 71% of the world's Internet users. Therefore, the influence of SNS in cyberspace is quite large, and the openness of individual daily life is also great. At present, Facebook is continuously increasing the number of personal information items that are made public in the basic setting that determines the scope of personal information disclosure. In 2005, I set my name, profile photo, and gender as public, but now I set my name, profile photo, gender, other profile data, friends information, post, and post photo unless the scope of such items is changed to private, then all related personal information is disclosed.

However, since users are often unaware of the associated risks, new policy approaches regarding SNS regulation are necessary. There are three major aspects of this study. First, we did not consider the user's

perception level in terms of the risk of the disclosure of personal information. Second, the sample size is small. Finally, there is no case analysis on the risks of disclosing personal information.

Through subsequent research, we will investigate the level of cognition of users with respect to the risk of disclosing personal information, and try to increase accuracy by expanding the number of subjects. In addition, we will conduct concrete and meaningful research by exploring possible countermeasures to positively influence user 's perceptions through case analysis on the risks of the disclosure of personal information.

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