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[Refereed Original Papers]

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Validity of TV, Video, Video Game Viewing/Usage Diary: Comparison with the Data Measured by a Viewing State Measurement Device

Keywords:

Media use measurement, Viewing diary, Validity, TV, Video, Videogame

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Abstract

The aim of this study was to examine the validity of data entered in participating subjects' TV, video, and video game viewing/usage diaries.

The participating subjects were eight families with third and fourth graders in the Tokyo Metropolitan Area. The amount of TV viewing (total and by TV channel), viewing of video-recorded TV programs, and playing of video games by third and fourth grade children were recorded in the viewing/usage diary and at the same time measured by a viewing state measurement device. The correlation coefficient between the data obtained from the diary and that from the measurement device was equal to or higher than the coefficient obtained in a preceding study, confirming the validity of the data entered in the viewing/usage diary.

1. Introduction

In our modern information society, visual media such as televisions, videos, DVDs, Blu-ray discs, and video games are part of our daily lives. Along with the increase of the role of visual media in our daily living, there has been increased social and academic interest in such topics as the physiological and psychological effects of such media on its users and the relationship between user personality traits as motivational factors for media use and the amount of media use. Due to this interest, there have been many psychological or sociological studies examining the amount of visual media use by type or content as an independent (explanatory) variable or a dependent (objective) variable (e.g., Dill, 2012; Bryant & Oliver, 2008). In particular, a large number of studies have been conducted to examine the relationships between children's visual media use and their physiological and psychological development, because children are believed to be more easily influenced by those media (Singer & Singer, 2012).

Scientific research showing the relationship between media use and various psychological factors, including behavioral trends and personality traits, has been a topic of great social interest. Therefore, if visual media exposure is to be used as an independent or a dependent variable, the actual amount of media use by study participants must be measured as accurately as possible.

The method, which most accurately measures the amount of the participants' visual media use, requires a device that automatically records the amount of time they spend in watching or listening to media. However, it is generally difficult to applying this method to a large scale.

To this end, a self-reporting questionnaire or a viewing diary has been often used as a method for measuring the amount of media use. In a viewing diary, the subject records the type of media used, the names of viewed programs, and the start and end times of media use. Therefore, a viewing diary has an advantage over a self-reporting questionnaire in that, while a questionnaire simply asks the participants how much time they spend using a certain type of media or watching a certain type of content per day, a viewing diary allows more detailed and accurate measurements of the duration of viewing and the type of content viewed during the study period. Moreover, the viewing diary also has the advantage of the ability to measure the use of multiple types of media simultaneously (such as watching television while playing handheld games like Nintendo DS). If the participants are young children, their parents usually record the diary for them. When this occurs, however, the accuracy of measured and recorded amounts of media use may be compromised.

Anderson et al. (1985) examined the accuracy of TV viewing diaries for 5-year-old children written by their parents. They studied the correlation between TV viewing time recorded in the viewing diary in increments of 15 minutes and TV viewing time calculated based on a video recorded in a room where a participating child watched TV. The obtained correlation was .84.

Anderson et al. (1985) used a video-recorded TV room as an objective index in the study. Note, however, there is always some risk of unsuccessful recording due to device failures or inappropriate operation. Also, because of the diversity of visual media used by children, it is necessary to examine the validity of a viewing diary not only

for the amount of TV viewing but also for the amount of DVD- or HDD-recorded TV programs, and the amount of video games played. In this study, therefore, the amount of media use was recorded in a TV, video, and video game viewing/usage diary, and at the same time measured by a device originally designed to obtain viewing rates for television stations. This device, connected to a standard TV, is capable of recording the amount of regular, BS, and CS TV programs viewed, the amount of DVD- and HDD-recorded TV programs viewed, and the amount of video games played. Then the validity of data recorded in the viewing/usage diary was examined by calculating the correlation between the data entered in the diary and the data obtained by the viewing state measurement device.

2. Method

2.1 Participants

This study was conducted in association with Video Research Ltd., a company that measures TV program viewing rates by collecting data from viewing state measurement devices installed in the residences of participating families.

The process of selecting the participating families began with a preliminary investigation of TV viewing, conducted online, among families working with Video Research Ltd. Based on the results of this preliminary investigation, families with third and fourth graders in primary school were selected. These families lived in Tokyo Metropolitan Area and did not have any family members employed in mass communications or research companies. Eight families were selected

from among the families satisfying these conditions in order to eliminate bias due to the mother's work. These eight families were asked to record their viewing habits via a machine and maintain a diary of their visual media viewing/usage. The mother of each participating family recorded in the diary her child's amount of visual media use.

2.2 Study period

The study was conducted in two parts. The first study was conducted from January 20 to 22, 2012, and the second study was conducted from February 10 to 12, 2012. The study period was set from Friday to Sunday because lifestyle patterns differ by the day of the week. Moreover, the study period was three days because this was the maximum length of time the viewing state measuring device could record.

Each study was conducted with four families. The participants of the first study were a female third grader, a male third grader, a female fourth grader, and a male fourth grader. The participants of the second study were a male third grader, a male fourth grader, and two female fourth graders.

2.3 Measurement of the amount of media use

The viewing/usage diary⁽¹⁾ Mothers of the participating children recorded in a viewing/usage diary the time their children started and ended watching TV, video-recorded TV programs (VHS tapes, DVDs, or HDDs (including Blu-ray discs)) or playing video games. The amount of visual media use was recorded in units of 15 minutes. When a participating child watched a

(1) The viewing/usage diaries used in this research were used in the NHK research project, "Better Broadcasting for Children." Originally, they were used to record media use for a one-week period.

TV program, his/her mother recorded the channel by selecting from NHK General TV (NHK-G), NHK Educational TV (NHK-E), Nippon Television Network (NTV), TV Asahi, Tokyo Broadcasting System Television (TBS), TV Tokyo, Fuji Television Network (Fuji TV), or Other. The mother recorded the channel number, channel name, program name, and/or game title; if “Other” was selected; a TV program recorded in VHS, DVD, or HDD (including Blu-ray disc) format was watched; or a video game was played. Figure 1 shows the sample of the viewing/usage diary used in this study.

The format used is similar to that of Anderson et al. (1985); this format lists the units of time recorded next to the TV channel number and the program name. However, Anderson et al. (1985) did not record the amount of media use other than TV.

Then, the type of media used, how many times each channel was watched (every time a channel was watched within a 15-minute time frame, it was counted as one time point), and how many minutes each channel was viewed were measured from 6 am to midnight (12 am) during the three day study period, were recorded. Obtained data was used in analysis. For example, Figure 1 shows that NTV programs were watched at two time points for 30 minutes in total.

Viewing state measurement device A viewing state measurement device and a hard disc recorder were connected to the TV that was most often used in the residence of each participating family. The device was capable of identifying the viewer when the TV was turned on and controlled by its remote control. Identification of the viewer was then collected as data via the Internet. After the viewer was identified, the hard disc recorder started to record what was shown on TV. The

recorded content was used to identify the channel and the name of each program viewed, if the participating child was identified as the viewer. Then, the amount of time spent watching according to the viewing state measurement device was translated into a value for each 15-minute time frame. Finally, the number of times and the duration of the use of visual media were analyzed in the same manner as the data obtained from the viewing/usage diary.

2.4 Procedure

A researcher from Video Research Ltd. visited each participating family before the study, installed a viewing state measurement device and a hard disc recorder, and showed the family how to use them. At the same time, the researcher gave each family a viewing/usage diary and showed how to enter information in the diary. The explanatory note includes the following: if the names of the programs, the titles of the games or the time intervals of the media use were unclear for the mothers, the participating children need to confirm them; it is necessary to record of all the types of media being used in cases where multiple types of media were used simultaneously; if there were any questions on the manner of recording, a researcher was consulted with; and other such similar things. The notion of recording media use in 15-min time intervals was explained using the following concrete example. “If your child was in contact with media 6:35 AM onward, please draw a vertical line starting from 6:30 AM.” Additionally, the researcher asked each family to fill in the diary only if participating children watching TV connected to the viewing state measurement device. Each family was told that the objective of the study was to examine how TV was used.

After the study was complete, the researcher visited each participating family to remove the viewing state measurement device and hard disc recorder. At the same time, the researcher collected the diary after confirming it contained no missing information or mistakes. In those cases where the times when media use began or finished were unclear, the researcher checked with the family and made necessary revisions.

3. Results

3.1 Frequency of media use according to the viewing/usage diary and the viewing state measurement device

Table 1 shows how many times each participating child used media during the study period. The difference between the diary data and device measurement data was then obtained for the total number of times of media use, which included viewing of TV programs regardless of the channel, viewing of video-recorded TV programs, and playing of video games. For half of the participants the viewing/usage diary recorded a higher frequency of media use, while the viewing state measurement device recorded a higher frequency of media use for the other half of the participants (Table 1).

3.2 Total duration of media use according to the viewing/usage diary and the viewing state measurement device

Table 2 shows how long each participating child used the media during the study period. The difference between the diary data and device measurement data was then obtained for the total duration of media use, which included viewing of TV programs regardless of the channel, viewing of video-recorded TV programs, and playing of

video games. For all participating children, a longer duration of media use was recorded in the viewing/usage diary than by the viewing state measurement device (Table 2). The smallest difference was 24 minutes, and the largest difference was 245 minutes. Mean of the difference was 146.88 minutes ($SD = 69.92$) for total duration of media use, 30.75 minutes ($SD = 117.71$) for TV viewing.

3.3 Correlations between the viewing/usage diary data and the viewing state measurement device data for the amount of media use

For each 15-minute time frame, the correlation between the data recorded in the viewing/usage diary and the measurement by the viewing state measurement device was examined for the amount of media use. The correlation coefficient on each channel and media type was calculated using 1728 data items (8 samples \times 3 days \times 72 time points).

Table 3 shows the result of Pearson's product-moment correlation analysis. The correlations obtained for the amount of TV viewing by channel were significant, ranging from .49 to .82. The correlation for the total amount of TV viewing was .79, also significant. The correlation was .73 for viewing video-recorded TV programs and .59 for playing video games. There was also a positive and significant correlation of .75 for the total amount of TV viewing, viewing of video-recorded TV programs, and playing of video games combined.

Finally, the correlations between the data entered in the diary and measurement data obtained by the device were obtained for the total amount of use of each type of visual media to compare with Anderson et al (1985) (Table 4).

Table 1 Frequency of media use by each participating child (measured in time points)

Sample No.	How to record ¹⁾	NHK-G	NHK-E	NTV	TV-Asahi	TBS	TV-Tokyo	Fuji-TV	Other	All channels ²⁾	Video	Video game	Total time points ³⁾
1	Diary	0	1	6	10	7	3	2	0	29	16	4	49
	Device	0	0	6	9	12	4	2	0	33	0	6	39
	Difference	0	1	0	1	-5	-1	0	0	-4	16	-2	10
2	Diary	0	0	8	0	6	6	8	0	28	35	0	63
	Device	0	0	10	3	3	2	6	0	24	24	0	48
	Difference	0	0	-2	-3	3	4	2	0	4	11	0	15
3	Diary	1	0	5	6	0	2	4	0	18	11	2	31
	Device	1	0	4	5	0	0	4	0	14	6	2	22
	Difference	0	0	1	1	0	2	0	0	4	5	0	9
4	Diary	9	0	11	0	4	3	4	4	35	13	0	48
	Device	4	0	9	0	2	3	1	2	21	11	0	32
	Difference	5	0	2	0	2	0	3	2	14	2	0	16
5	Diary	1	0	5	2	3	13	45	0	69	7	0	76
	Device	1	0	5	7	3	15	41	0	72	10	0	82
	Difference	0	0	0	-5	0	-2	4	0	-3	-3	0	-6
6	Diary	4	6	10	12	0	27	6	0	65	20	28	113
	Device	8	3	24	20	3	31	15	3	107	17	23	147
	Difference	-4	3	-14	-8	-3	-4	-9	-3	-42	3	5	-34
7	Diary	0	0	22	10	6	0	20	3	61	30	12	103
	Device	0	1	34	15	8	0	21	9	88	34	0	122
	Difference	0	-1	-12	-5	-2	0	-1	-6	-27	-4	12	-19
8	Diary	0	0	0	21	2	4	15	0	42	7	2	51
	Device	0	0	2	23	1	7	24	1	58	6	0	64
	Difference	0	0	-2	-2	1	-3	-9	-1	-16	1	2	-13

1) "Diary" means the measured amount of visual media use recorded in the TV, video, video game viewing/usage diary, and "device" means the amount of visual media use measured by the viewing state measurement device. "Difference" is the value obtained by subtracting the amount of visual media use measured by the viewing state measurement device from the amount of visual media use recorded in the diary.

2) "All channels" means the total number of times that NHK-G, NHK-E, NTV, TV Asahi, TBS, TV Tokyo, Fuji TV, or Other channel was watched.

3) "Total time points" is obtained by adding "All channels," the number of times video-recorded TV programs were watched, and the number of times video games were played.

Table 2 Total duration of media use by each participating child (measured in minutes)

Sample No.	How to record ¹⁾	NHK-G	NHK-E	NTV	TV-Asahi	TBS	TV-Tokyo	Fuji-TV	Other	All channels ²⁾	Video	Video game	Total ³⁾
1	Diary	0	15	90	150	105	45	30	0	435	240	60	735
	Device	0	6	82	144	207	56	29	0	524	0	89	613
	Difference	0	9	8	6	-102	-11	1	0	-89	240	-29	122
2	Diary	0	0	120	0	90	90	120	0	420	525	0	945
	Device	0	0	176	67	40	33	105	0	421	351	0	772
	Difference	0	0	-56	-67	50	57	15	0	-1	174	0	173
3	Diary	15	0	75	90	0	30	60	0	270	165	30	465
	Device	16	0	69	76	0	11	64	0	236	90	40	366
	Difference	-1	0	6	14	0	19	-4	0	34	75	-10	99
4	Diary	135	0	165	0	60	45	60	60	525	195	0	720
	Device	70	3	149	1	44	47	15	38	367	140	0	507
	Difference	65	-3	16	-1	16	-2	45	22	158	55	0	213
5	Diary	15	0	75	30	45	195	675	0	1035	105	0	1140
	Device	15	0	53	43	40	186	513	0	850	113	0	963
	Difference	0	0	22	-13	5	9	162	0	185	-8	0	177
6	Diary	60	90	150	180	0	405	90	0	975	300	420	1695
	Device	77	37	224	214	38	374	151	28	1143	219	309	1671
	Difference	-17	53	-74	-34	-38	31	-61	-28	-168	81	111	24
7	Diary	0	0	330	150	90	0	300	45	915	450	180	1545
	Device	0	1	358	142	50	0	224	75	850	450	0	1300
	Difference	0	-1	-28	8	40	0	76	-30	65	0	180	245
8	Diary	0	0	0	315	30	60	225	0	630	105	30	765
	Device	0	0	6	244	2	65	248	3	568	75	0	643
	Difference	0	0	-6	71	28	-5	-23	-3	62	30	30	122

1) "Diary" means the measured amount of visual media use recorded in the TV, video, video game viewing/usage diary, and "device" means the amount of visual media use measured by the viewing state measurement device. "Difference" is the value obtained by subtracting the amount of visual media use measured by the viewing state measurement device from the amount of visual media use recorded in the diary.

2) "All channels" means the total minutes spent on NHK-G, NHK-E, NTV, TV Asahi, TBS, TV Tokyo, Fuji TV, or Other channel was watched.

3) "Total" is obtained by adding "All channels," the minutes spent on video-recorded TV programs were watched, and on video games were played.

Table 3 Correlations between the data recorded in the TV, video, video game viewing/usage diary and the measurement by the viewing state measurement device (for each 15-minute time frame)

NHK-G	NHK-E	NTV	TV-Asahi	TBS	TV-Tokyo	Fuji-TV	Other	All channels ¹⁾	Video	Video game	Total ²⁾
.72	.51	.78	.82	.52	.79	.71	.49	.79	.73	.59	.75

1) "All channels" means the total number of times that NHK-G, NHK-E, NTV, TV Asahi, TBS, TV Tokyo, Fuji TV, or Other channel was watched.

2) "Total" is obtained by adding "All channels," the number of times video-recorded TV programs were watched, and the number of times video games were played. All coefficients are significant ($p < .01$).

Table 4 Correlations between the data recorded in the TV, video, video game viewing/usage diary and the measurement by the viewing state measurement device (for total amount of each type of media use)

NHK-G	NHK-E	NTV	TV-Asahi	TBS	TV-Tokyo	Fuji-TV	Other	All channels ¹⁾	Video	Video game	Total ²⁾
.88**	.99***	.96***	.94***	.66	.99***	.97***	.80*	.92**	.84**	.88**	.99***

1) "All channels" means the total minutes spent on NHK-G, NHK-E, NTV, TV Asahi, TBS, TV Tokyo, Fuji TV, or Other channel was watched.

2) "Total" is obtained by adding "All channels," the minutes spent on video-recorded TV programs were watched, and on video games were played. * $p < .05$, ** $p < .01$, *** $p < .001$.

The obtained correlations were positive and significant, being equal to or higher than .80 for all TV channels, video-recorded TV programs, and video games, except for the amount of TBS programs watched. The correlation was .92 for the overall TV viewing and .99 for the total amount of TV viewing, video-recorded TV programs, and video games combined.

4. Discussion

At the beginning, note that the measuring device's identification accuracy of the viewer. In this study, the viewer was identified by pushing the button of the device's remote control. This identification system has been used to measure the individual TV viewing rate for such a long

time, that this system is supposed to have the reliability to some extent. However, the accuracy of this system was not examined in this study. Therefore, it is necessary to consider the influence of the viewer identification error on the results of this study.

The frequency of media use was recorded as higher in the viewing/usage diary for some participants while it was measured as higher by the viewing state measurement device for other participants. Meanwhile, the amount of media use was always recorded as higher in the viewing/usage diary. This means that the mothers of the participating children recorded in the diary a larger amount of media use than actually occurred. One of the possible reasons is that, while the viewing/usage diary was entered

for each 15-minute time frame, the viewing state measurement device recorded the amount of media use every minute. Even if a participating child used the media for only a part of the 15-minute time frame, the amount of media use would be recorded as "15 minutes" in the diary. This would likely to result in recording of a larger amount of media use than actually occurred. The result of this study indicated that the total amount of TV viewing was recorded as longer in the viewing/usage diary by approximately 10 minutes per day on average. This must be kept in mind when analyzing the amount of media use recorded in the viewing/usage diary. Shortening the time interval to 10 min would improve the precision of measurements in the viewing/usage diary.

The correlations between the data entered in the viewing/usage diary and the data recorded by the viewing state measurement device were .79 for the frequency of overall media use and .92 for the total amount of media use. The correlation for the total amount of media use was equal to or higher than the correlation obtained by Anderson et al. (1985). Therefore, the accuracy of the viewing/usage diary was confirmed to be equal to or higher than the accuracy found by Anderson et al. (1985). For the amount of viewing of video-recorded TV programs and the amount of video game play, there was a positive correlation of .80 or higher between the data entered in the viewing/usage diary and the data obtained by the viewing state measurement device. Again, the validity of the viewing/usage diary was confirmed with a certain degree of confidence. However, note that compared with Anderson's research, there is a higher possibility that the calculation of the correlation coefficient in this research was influenced by extreme dates because of fewer

participants.

For data on the participants' video game playing, it was noticed that the diaries contained more data than the devices had recorded. This was supposed to have occurred not only because of the units recorded in the diaries that were mentioned above but also because of the limitations of the measuring device. The measuring device could only measure the videogame device it was associated with, whereas the diaries could measure handheld game playing time.

There is a growing trend of recording TV programs on an HDD and watching them at a more convenient time instead of watching TV programs in real time (Hirata & Shigyo, 2013), and young children are starting to adopt the same trends (Anraku, 2013). Also, as in the case of TV programs, there has been a strong interest in the effect of videogame play on children's development, and many studies have been conducted on this subject as well (Anderson, Dill & Gentile, 2012). In the future, the social and academic interests to empirically examine the effects of standard TV-based visual media, including TV programs, VHS, DVD, or HDD-recorded TV programs, and video games, on children's development will continue to grow. The findings of this study propose an effective methodology for measuring the amount of media use and therefore have an important significance.

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How Japanese Newspapers Contribute to Community Engagement

Keywords:

Community Engagement, Media Use, Newspapers,

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Abstract

This work aims to investigate how Japanese newspapers contribute to community engagement. Ninety percent of households in Japan subscribe to newspapers. Moreover half of Newspaper circulation is concentrated on major newspapers whose head-quarters are located in a few major cities such as Tokyo and Osaka. Nation-wide news and topics are the main content of these major papers. This style is similar to Japanese TV programs. As prior studies have shown, not nation-wide mass media but localized media such as community radio, contributes to community engagement as a part of production of social capital. This study quantitatively investigates the impact of newspapers by comparing them with other media such as TV, radio, magazines, PCs and mobile phones.

The result of the regression shows that the impact of newspapers is different from that of TV. The former is positively correlated to community engagement; on the other hand, the latter is negatively correlated. Although a large part of Japanese newspapers traditionally focus on national news, the result suggests that they also support everyday life activities in local communities. Furthermore, new digital media affects community engagement negatively. The length of PC and mobile phone use negatively correlates to community engagement. The authors discuss factors that could cause these different effects of the above media on community engagement.

1. Introduction¹

This work aims to investigate how Japanese newspapers contribute to community engagement. Moreover half of their circulation is concentrated on major newspapers whose headquarters are located in a few major cities such as Tokyo and Osaka.

Japanese newspapers are characterized by a large circulation and delivering system. As Hatanaka and Hayashi (2012) pointed out, 21 Japanese newspapers are ranked within the top 100 world-wide (Table. 1), and all of these are national papers. According to WAN 『World Press Trends (2009)』, the Japanese newspaper total circulation is the ranked third place next to China and India, which have enormous populations. Furthermore, even the circulation of one Japanese newspaper company is large. The rate of the home delivery system is also notable. About 95% of households use the home delivery system in Japan (Table. 2), contributing to their enormous circulation.

Additionally, Japanese newspapers have a high level of support regarding in local information. The Japan Newspaper Publishers & Editors Association (2011)² did a survey for newspapers, tv, radio, magazine, and Internet. As a result of this research, newspapers get the highest support in the field of ‘everyday topics’ and ‘coherence for local community’ among the five media. In addition to this, articles on local information are ranked fifth place within 20 kinds of articles that readers usually read. From this survey,

we could say that newspapers in Japan are strongly related to everyday life and the local community. In this paper, the authors aim to examine the effects of newspaper on community engagement.

Table 1 World's 100 Largest Newspapers

Rank	Title	Circulation (000)
1	Yomiuri Shimbun Japan	14, 067
2	The Asahi Shimbun Japan	12, 121
3	Mainichi Shimbun Japan	5, 587
4	Nihon Keizai Shimbun Japan	4, 635
5	Chunichi Shimbun Japan	4, 512
6	Bild Germany	3, 867
7	Sankei Shimbun Japan	2, 757
8	Canako Xiaoxi (Beijing) China	2,627
9	People's Daily China	2, 509
10	Tokyo Sports Japan	2, 425

Source: “World Press Trends (2005)”, World Association of Newspapers.

Table 2 The transition of home delivery rate in Japan

year	Home delivery	Meeting sale	Mail	Others
2012	94.94	4.57	0.04	0.45
2011	94.97	4.52	0.04	0.48
2010	94.86	4.6	0.04	0.5
2009	94.73	4.73	0.04	0.5
2008	94.6	4.84	0.05	0.51

1 This research is based on a presentation of “e-tech & e-case 2013”. This research paper was written by the first author. The author would like to express his gratitude to Tanaka, who gave advice on analyzing this data.

2 This research provide us many aspects of newspaper and its readers, such as time of reading, popular genres of articles, where and how people read newspaper, subscription time for newspaper etc.

2007	94.35	5.06	0.05	0.54
2006	94.32	5.09	0.05	0.54
2005	94.15	5.29	0.05	0.51
2004	93.94	5.47	0.05	0.54
2003	93.87	5.55	0.05	0.53
2002	93.8	5.63	0.05	0.52
2001	93.38	6.06	0.05	0.51
2000	93.49	5.95	0.05	0.5

Source: "The transition of home delivery rate in Japan," The Japan Newspaper Publishers & Editors Association.

2. Related literature

This section reviews previous studies related to our field of study.³ Furthermore, the authors explain limitations of those studies and propose research questions of this paper.

2.1 Related literature

There are many studies on media use and social capital, and most of the studies in this field response to Putnam's "Bowling Alone" thesis (Shah et al., 2009, p.207). Putnam (1995, 2000) argued that society's social capital and the level of face-to-face association had declined because people tend to spend more time watching television in private. His study found that watching television is negatively related to social capital, whereas the same correlation with newspaper reading was found to be positive.

However, Putnam's study had been criticized by many researchers who pointed out Putnam selected TV use time as a variable. However, they showed that not only the media use time, but also the contents of TV programs is important. These results clarified that TV viewing of hard contents

had a positive effect on social capital indicators. For example, Norris (1996) investigated the impact of the media on civic engagement and political participation. The result showed that newspaper readership is significantly associated with six out of eight activities. Furthermore, Shah (1998) argues that the use of TV is not necessarily negative with regards to mutual trust and social capital; it depends on the type of television content. The relationship between TV and social capital seems to be dynamic and highly contextual. Shah (2009) review the researches on the relationships between civic participation and media use from the five points of view. Especially, in the part of "usage patterns, attending to disaggregated media effects on civic life", newspaper reading has a positive effect on political or community participation (McLeod et al., 1999; Sotirovic & McLeod, 2001). On the other hand, television watching is not the monolithic danger, but it is more conditional.

These arguments have been extended to the Internet, and studies on use of the Internet have been conducted in comparison with the use of TV and newspapers. Kraut et al (1998), argued that the Internet use had a negative effect on social involvement and psychological well-being. In a later follow-up investigation, a similar result was not observed. This result also found that people with a diplomatic character tend to participate more in their communities. On the other hand, introverted people tend to avoid community participation (Kraut et al, 2002). Shah et al. (2001) showed that use of the Internet for information exchange further influences trust in people and civic participation than do uses of traditional print

³ We assume that social capital is a necessary condition for involvement in community engagement, so we mainly review prior studies on social capital.

and broadcast news media. The viewing time of television was negatively correlated with civic engagement and contentment with life, whereas only in case of hard news on TV, they were positively correlated. Conversely, both the reading time of newspaper and hard news reading were positively correlated with civic engagement. The usage of the Internet for information exchange was a key contributor in accounting for individual's social capital in civic engagement. Hampton (2003) demonstrates that ICT facilitates community participation and collective action by creating large, dense networks of relatively weak social ties and through the use of ICT as an organizational tool. Tsuji (2006) assessed the relation between three social capital indicators and media use, Internet use did not have an effect on these indicators. However, newspaper reading was positively correlated, while TV viewing had a weak correlation with these indicators. These researches showed that the local online community has a positive effect on participation in the local community (Kobayashi, et al., 2006; Kobayashi, et al., 2007; Shimura and Ikeda, 2009).

Regarding on the effect of mobile phone and SNS is being conducted as well. Miyata and Kobayashi (2008) showed that PC email may increase the size of personal social networks, whereas mobile phone email is useful in maintaining existing strong ties that provide social support. Some of the researchers focus on social media (Steinfeld et al., 2008; Valenzuela et al., 2009), investigating the relationship between the intensity of SNS use and social capital.

Recently, many researchers focus on the usage of ICT for social participation. Are newspapers effective for social capital or community engagement in this circumstances? To investigate this, the authors surveys how Japanese newspapers

contribute to community engagement.

2.2 Research Questions

This study aims to investigate the relation between newspaper reading and community engagement. There are numerous studies with regard to social capital. Although prior studies regarding social capital or civic engagement have argued the effect of media use, they have investigated each media effect separately or at most four media format: TV, newspaper, PC and mobile. In our research, we used six media, focusing on use time. For example, radio is one variable that is not frequently treated in the precedent studies. Funatsu (2006) wrote that community media, such as CATV and community FM radio, plays an important role for citizen to participate in their community [18]. Therefore, considering the role of media in fostering this kind of community participation, the authors intend to investigate newspapers' effect on community engagement in relation time use of six specific media: TV, newspaper, radio, magazine, PC and mobile.

Hence, we investigate the following research question:

RQ : When compared with other media, how is the influence of the newspaper different?

3. The Data

3.1 Data

Data for this study came from the 2011 J-READ (Japan Readers and Areal Data), directed by Video Research Ltd. This study is based on a random sample survey (RDD method) of 28,859 respondents in all over Japan.⁴ Depending on the population scale of each metropolis and districts,

six types of sample size was set. Potential respondents were chosen among 15-69 years. Self-administered questionnaire were sent to respondents by post, and sent back by post. Data collection occurred between 16th October and 22th October 2011.

3.2 Variables

Criterion variables

Community engagement. As explained in 3.1, we utilize J-READ data in our analysis. So, the authors choose the items from the set of question about the genre of “politics”, “region”, and “environment and social activity”. The items were chosen based on the following criteria: “the information on local events or news,” “communication with neighborhood” and “participation intention of local events.”

Community engagement was measured by eight items: “7. I am interested in local politics or administration.” “32. I would rather participate in

a local event or festival.” “33. I would rather participate in a neighborhood association or children’s group meeting.” “34. The area living in is easy to live.” “35. Local information is more important than national information.” “36. I have an attachment to my living place.” “160. I am interested in the environmental problem of the town where oneself lives in.” “169. I am interested in disaster prevention and area security maintenance.”⁵ Community engagement is a 8-item additive index consisting of dichotomous (yes/no). These eight items were summed into one scale (KR-20=0.68, M=4.66, SD=2.08, N=27052) (Table 3).

Controlling variables

Demographic variables. We use demographic variables as controlling variables. They were as follows: sex (Male=50.1%, Female=49.9%), age group, years of residence (M=6.18, SD=1.66, N=28579), educational background (M=2.74,

Table 3 Fundamental statistics eight items of community engagement

Question	the percent of "Yes"
“7. I am interested in local politics or administration.”	72.37
“32. I often participate in a local event or festival.”	44.98
“33. I often participate in a neighborhood association or children’s group meeting.”	37.32
“34. The area living in is easy to live.”	85.02
“35. Local information is more important than national information.”	50.13
“36. I have an attachment to my living place.”	77.65
“160. I am interested in the environmental problem of the town where oneself lives in.”	52.77
“169. I am interested in disaster prevention and area security maintenance.”	48.21
Local interest (min0-max8) KR-20= .68, N=27052	
Average	4.66
SD	2.08

4 RDD method is limited in that household residents who do not have a land line phone connection cannot be reached.

5 We choose the items from “Q-37(J-READ)” which are related to community engagement. The number of item is the consecutive numbers of “Q-37”.

SD=0.92, N=25537), full time employed (41.1%), household income (M=6.36, SD=3.07, N=27108), house ownership (82.1%), children (under elementary school) (27.1%), and household member (M=3.52, SD=1.49, N=28281).

Media use

Media use variables. In this survey, we use the length of media usage time as dependent variable. Media use was assessed using a measure, which required respondents to indicate how many hours they spent using six different media. Respondents were asked, "How long do you spend on each of following on a day?" The categories majored were Newspaper/Television/Radio/Magazine/Internet (PC)/Internet (mobile).⁶ Possible answered were: (0) don't use; (1) 5 minutes; (2) 15 minutes; (3) 25 minutes; (4) 35 minutes; (5) 45 minutes; (6) 55 minutes; (7) 75 minutes; (8) 105 minutes; (9) 150 minutes; (10) 210 minutes; (11) 270 minutes; (12) 300 minutes.

4. Analysis

4.1 The Model

In order to examine the relationship of newspaper reading and community engagement, we performed a multiple regression analysis as follows⁷:

$$Y = \alpha + \beta_1 \text{age} + \beta_2 \text{gender} + \beta_3 \text{education} + \beta_4 \text{living together} + \beta_5 \text{Children} + \beta_6 \text{house owing} + \beta_7 \text{Grandchild} + \beta_8 \text{Household} + \beta_9 \text{living} + \beta_{10} \text{Mediause (Newspaper)} + \beta_{11} \text{Mediause (TV)} + \beta_{12} \text{(Radio)} + \beta_{13} \text{(Magazine)} + \beta_{14} \text{(PC)} + \beta_{15} \text{(Mobile)} + \varepsilon$$

The model assesses affects of newspaper reading on community engagement by controlling for demographic data such as gender, age, years of residence, educational background, fulltime employed, households, house owing, household, and children (under elementary school).

In this study, our sample size was exceptionally large (N = 20709), so we need to discuss the result based on not only its "statistical significance," but also its "effect size". Cohen (1988), in dealing with a large data set, established the criteria of "f² effect size." To measure the size of effect: small = 0.02, medium = 0.15, and large = 0.35. Our studies effect size is 0.12. This number is similar in value to Cohen's medium effect size (0.15).

J-READ asked respondents about their media use time during both weekdays and weekends. In this study, we decided to focus on media use time during weekdays, since Tsuji (2006) showed that there was no significant difference between weekday media use and weekend media use. To verify this, we performed a multiple regression analysis using Saturday and Sunday media use data.

4.2 Analysis

Table 4 shows the result of the regression analysis. Firstly, the characteristics of people who participating in community engagement was as follows. The most effective variables was "children". Having children has a significant positive effect on community engagement, while "fulltime employed" has a significant negative effect.

Secondly, our study found the following effects of media use on community engagement. To

6 e-mail use is removed from Internet use (PC and mobile phone).

7 When we performed a multiple regression analysis, we standardized a criterion variable and media use variables.

Table 4 Regression analysis predicting the community engagement

	<i>B</i>	(SE)	<i>t</i>
<i>Demographic variables</i>			
Sex	0.015	0.03	0
Number of people in household	0.009	0.018	10.177
Educational background	0.09	0.009	4.918
Years of residence	0.038	0.008	8.941
Household income	-0.03	0.032	3.947
House ownership	0.033	0.005	7.966
Having Children(under elementary school)	0.053	0.037	16.904
Fulltime employed	0.155	0.034	-2.774
Age group 15-29	0.154	0.041	-10.879
Age group 50-69	0.072	0.011	15.598
<i>Media use</i>			
TV	-0.042	0.007	-5.942
Radio	0.044	0.006	6.501
Newspaper	0.109	0.007	14.919
Magazine	0.028	0.007	4.131
PC	-0.024	0.007	-3.447
Mobile	-0.001	0.008	-0.201
R^2 (%)	10.5		
adj R^2 (%)	10.5		
N	20709		

compare the effect of newspapers with the effect of other media, we used the other media use variables, such as TV, radio, magazine, PC and mobile phone. After controlling for demographic variables and five other media measures, the effect of newspapers was positively correlated to community engagement. The effect of newspapers reading time is the most strongly effective on community engagement among the six media use variables. In addition to newspapers, radio and magazines are positively correlated to community engagement. On the other hand, TV and PC usage are negatively correlated to community engagement.

5. Discussion

The purpose of our study is to explore how Japanese newspapers contribute to community engagement. Our analysis shows that the standardized coefficient of reading newspapers on community engagement shows the highest value among the other five media's coefficients. Although a large part of Japanese newspapers traditionally focus on national news, the results suggest that they also support everyday life activities in local communities.

The effect of newspapers and TV on social capital has been examined previously, but in this research, we focus on community engagement. Compared with these prior studies, the characteristics of this study can point to new directions, since it used a large number of media use variables. The number of variables in prior studies is at most four, whereas our study incorporates a more comprehensive number of use time variables for a wider range of media.

Our findings can be summarized in two main points: first, is related to demographic factors;

second, is related to media use. In the following, we discuss the details about each one.

5.1 Demographic Variables

Regarding demographic variables, there are three main findings: one strong negative effect, broad positive effects, and an age effect. Importantly, in our analysis, only one negative effect factor appeared: the "working style" variable had a significantly negative effect. People who work long hours are unable to become engaged in their respective communities due to their long time constraints.

The second finding is the positive effect factor, which was very wide. In our analysis, all the variables except "fulltime employed" and "sex" had a significantly positive effect. Among these variables, the one with the strongest effect was "having children". That is, people who have children are more likely to become engaged in their respective communities than those who do not have children. In addition to this variable, "years of residence," "household members", "house ownership" had a significant strong effect as well. These results are consistent with prior studies on social capital.

Finally, the age variable showed a significant effect. In our analysis, we established three dummy categories: 15-29 age group, 30-49 age group, and 50-69 age group. When we performed a multiple regression analysis, we set the 30-49 age group as the base category. As a result, the 30-49 age group was shown to be more likely to become engaged in their communities than the 15-29 age group. However, when compared with the 50-69 age group, the 30-49 age group is less likely to become engaged in their community. The effect of aging on community engagement was confirmed in this result.

5.2 Media Use Variables

Regarding media use variables, newspapers, radio and magazine are positively correlated to community engagement, whereas TV and PC are negatively correlated to community engagement. The two main findings of our analysis are as follows.

The first finding concerns the relationship between newspaper reading and community engagement. Reading newspapers has the strongest effect on community engagement after having controlled for the five other media influences, which is noteworthy.⁸ This result is consistent with prior studies. Korenaga (2010) examined this using four media use variables (TV, newspapers, PC and mobile phone), which showed very interesting results. Using “centeredness private life” variable as an independent variable, he showed that the more people read newspapers or use the Internet with PC, the more people are not private life centered. This result suggests that reading newspapers widens their interest in others, similar to our results. However, our independent variable is community engagement.

The second notable result is the effect of new media (PC): our analysis showed is the more people use this media, the less they are engaged in their communities. Regarding this result, it is important to bear in mind that we used total use time here. In fact, our results contrast with prior studies. Previous studies focus on e-mail (PC and mobile) which confirmed that sending PC and mobile e-mail has a positive effect on community participation and social capital indicators (Miyata & Kobayashi, 2008). We hypothesize this difference depends on the selection of the variable that we used. Importantly, PC and mobile phone use can

include many activities, which may or may not connect people.

6. Conclusion

The goal of this article was to investigate how newspapers contribute to community engagement in Japan. Our results demonstrate a connection between newspaper reading and community engagement. Although most of all Japanese newspapers’ topics focus on nationwide news, the time of reading newspaper is positively correlated with local community Engagement.

Our study has an important limitation, which is media use variables. Our research measures only overall media use time. This problem has been identified in prior research. However J-READ’s sample size and technique are solid, so in a changing media use environment, these results are still important to consider. Prior studies demonstrated that the contents of TV programming has a positive relation with social capital indicators (Norris, 1996; Tsuji, 2006). For future study, we should compare the results between the effect of “media use time” and “the every contents of media use.”

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8 We can not prove that this is a casual relationship where newspaper reading causes Community Engagement.

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APPENDIX

Appendix A: Question Wording

Community engagement

- "7. I am interested in local politics or administration."
- "32. I would rather participate in a local event or festival."
- "33. I would rather participate in a neighborhood association or children's group meeting."
- "34. My area is easy to live."
- "35. Local information is more important than national information."
- "36. I have an attachment to myneighborhood."
- "160. I am interested in the environmental problem of

the town where oneself lives in."

- "169. I am interested in disaster prevention and area security maintenance."

Demographic variables

- Age*: (1) 15~19; (2) 20~29; (3) 30~39; (4) 40~49; (5) 50~59; (6) 60~69.

Gender: "Male = 1" or "Female = 0"

Educational background: "Which is your educational background?"

- (1) junior high school; (2) high school or upper secondary specialized training school; (3) a junior college or technical college or special [vocational] school; (4) university or postgraduate college

Household income : " Which of following categories does your household income fall ?"

- (0) No income; (1) less than 1million yen; (2) 1 million yen ~2 million yen; (3) 2 million yen ~3 million yen; (4) 3 million yen ~4 million yen; (5) 4 million yen ~5 million yen; (6) 5 million yen ~6million yen; (7) 6 million yen~7 million yen; (8) 7 million yen~8 million yen; (9) 8 million yen~9 million yen; (10) 9 million yen~10 million yen; (11) 10 million yen~12 million yen; (12) 12 million yen~15 million yen; (13) more than 15 million yen

Years of residence : (1) less than 1year; (2)1~3 years; (3) 3~5 years; (4) 5~10 years; (5) 10~20 years; (6) 20~30 years; (7) 30~40 years; (8) more than 40

Number of people in household : How many people are there living together including yourself?

- (1) 1; (2) 2; (3) 3; (4) 4; (5) 5; (6) 6; (7) 7; (8) more than 8 people.

House ownership: 0 (Rent house) or 1(owned by respondent).

Fulltime employeed: 0 (part-time job and self-employed people) or 1 (fulltime regular employee and fulltime temporary employee)

Media use variables

Media use: How long do you spend on each of the

following on week days , Saturday and Sunday?⁹

Newspaper/ *Television*¹⁰/*Radio/Magazine/Internet (PC)/Internet (mobile)*: (0) don't use; (1) less than 10 minutes; (2) 10 minutes to 20 minutes; (3) 20 minutes to 30 minutes; (4) 30 minutes to 40 minutes; (5) 40 minutes to 50 minutes; (6) 50 minutes to 1 hour; (7) 1-1.5 hours; (8) 1.5-2 hours; (9) 2-3 hours; (10) 3-4 hours; (11) 4-5 hours; (12) more than 5 hours

9 In this study, we used the median of each category.

10 When we compared J-READ's average TV use time with other investigations, so we changed TV's (12) more than 5 hours into 687 to get closer to "NHK (Nihon Housou Kyoukai) National Time Use Survey 2010".

Designing Digital Storytelling Workshops for Vulnerable People: A Collaborative Story-weaving Model from the “Pre-story Space”

Keywords:

Digital Storytelling, participatory media, story-weaving model, dialog, photo-taking

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Abstract

Digital Storytelling (DST) is a grassroots movement and a workshop-based practice through which people are taught to use digital media to create short video stories, usually about their own lives. Although DST practices are spreading throughout the world, it seems that little attention has been given to the story-generating process. In running several workshops, we presumed that it was difficult for many people to express their experiences and thoughts in a clear, coherent way, and it is important to rethink how they generate their stories. In this paper, we propose a digital storytelling workshop model for vulnerable people that entails establishing key concepts of “the collaborative story generation” from “pre-story space.”¹

First, we examined two game-like workshop methods. One of them was a DST program “Media Conte,” in which participants and facilitators co-created the stories primarily through dialogs and card games. The other was “Photo Karuta,” in which participants were required to take photos and interview others to find new perspectives through fieldworks. Both workshops shared the concept of focusing on pre-story space to generate stories. These workshops were developed and modified through numerous attempts, which were conducted by the methodology of “critical media practice.”²

At the end of this paper, we depict how the collaborative story-weaving model is developed from the pre-story space and discuss the advantages for vulnerable people using these storytelling methods.

1. Background and objectives

1-1. Why should we focus on pre-story Space?

Typically, a Digital Story is a two-to-three minute video clip that combines photo images with a storyteller’s voiceover. It is produced through intensive workshops during which each participant speaks freely to constructively address the stories told by each other participant (“story circles”). Stories told in this format focus on everyday life, such as memories of school days, personal experiences, and family histories. These videos can be likened to sonnets or haiku for the digital age (Hartley & McWilliam, 2009). This process was inspired by the performances of artist D. Atchley, and the California-based Center for DST has continued his activities, implementing his practices worldwide. Many individuals and groups conduct the workshops over a wide range of locations and in various fields of interest, such as education, empowerment, and public history³ (Lambert, 2013; Tsuchiya, 2013).

While participatory media or public access television have attracted increased attention across Japan, most citizen media practices have been developed for “healthy” citizens, who are viewed as having clear opinions and the ability to

logically express themselves. In our society, since passionate groups promoted these media, they unintentionally tend to exclude the engagement of the everyday people. That is, participatory media still has not become a familiar presence for vulnerable people.⁴ In this context, the examples of global DST practices, which are aimed toward laypeople’s expression, are shown to benefit participatory media practices throughout Japan as well.

Certainly, DST is a unique form of media, allowing laypeople to simply and richly express their thoughts and everyday lives. However, we have a question about their premise that “everyone has a story to tell,” which is often assumed in basic Californian practices. We attempted a couple of trial workshops based on the DST approach, and it proved difficult to develop meaningful stories. In our experimental workshops, vulnerable participants seemed unable to voice what they desired to say in individual situations and were not conscious or self-aware of the own stories. In the Western model, it seems that little attention has been given to the story-generating process. By conducting several workshops with vulnerable groups, Ogawa & Ito’s previous paper pointed

1 This is a study to explore people’s media creativity by designing and examining experimental workshops, which are based on an approach of the Critical Media Practice proposed by Mizukoshi (Mizukoshi, 2011).

2 In Critical Media Practice, we will design a system or program to facilitate citizen media expression and plan and hold a workshop to implement the system. We will then analyze and evaluate the results of the workshop, based on which we will develop an improved workshop plan. By repeating this cycle, we will incrementally improve the performance of workshop program (Mizukoshi, 2012).

3 Of particular note is the Capture Wales project in the UK. The project attracted attention as a high-profile example of this type of activity in which the BBC, which operates under the banner of objective reporting, transferred editorial authority to general audiences (Meadows and Kidd, 2009). Lambert, the founder of the Center of DST in California, notes that over 15,000 people were trained in the art of DST (Lambert, 2013).

4 In this paper, we define “vulnerable people” as the voiceless in society such as marginalized people and laypeople who are inexperienced in expressing themselves in public.

out the importance of focusing on the “pre-story space.” The term refers to a space in which only small fragments of ideas, experiences, or untold complaints, or laughter, —“story seeds”—are jumbled together prior to verbalization (Ogawa & Ito, 2010). It is important to rethink how they generate their stories and to start practices from the pre-story space.

1-2. Objectives of this paper

In this paper, by developing the concept shown in previous paper about pre-story space and examining and comparing our two workshop methods and results,⁵ we propose a new model of story generation for vulnerable people.

First, we re-examined our workshop programs to determine how we intended to generate stories. The first workshop method (Media Conte) included finding story seeds inside of a supposed storyteller and combining the picked seeds to rearrange them into a storyline. The examined second workshop (Photo Karuta) included seeking story seeds in the outside world. It set up fieldworks during which storytellers visited unfamiliar locations equipped with cameras. While photographing the location and witnessing others, the storytellers picked up story seeds. Those seeds were selected and used to create a set of game cards, called “Photo Karuta,” which displayed local features that were in line with participant’s established theme.

By comparing these two workshops and clarifying their common and contrasting points, we attempt to extract a model that could facilitate vulnerable people to generate stories, and examine a new digital storytelling perspective. In addition, we want to emphasize that our goal is not to analyze and verify experimentally and demonstratively subjects such as the reactions to or changes in the participants or the works they have created in workshops. Rather, the goal of this paper is to devise a storytelling program for educational and societal practice to present new possibilities for digital storytelling.

2. In the case of Media Conte

2-1. General information about Media Conte

As an attempt to seek out a DST model that adhered to Japanese society, we have continuously improved our two-to-three day workshop program, named “Media Conte,” since 2008.⁶ With our project, more than 10 workshops have been conducted among teenagers with foreign nationalities, senior citizens, disabled people, and students in Fukushima; over 100 Digital Stories have been created thus far. Setting aside the Western assumption that “everyone has a story to tell”, we designed workshop programs that would enable laypeople to generate stories that focused on their everyday thoughts and dissatisfactions. This program intends to develop

5 Media Conte workshops are mainly conducted by A. Ogawa, M. Ito, and S. Mizojiri, who collaborate with members: K. Sakata, S. Mizukoshi, A. Kikuchi, and Y. Tsuchiya. Photo Karuta was designed and conducted by Y. Tsuchiya.

6 We have been conducting workshop, since 2008, with teenage children of foreign workers of Japanese descent, senior citizens, women, disabled persons, and university students in Iwaki, Fukushima (Higashi Nippon International University). For more details, see <http://mediaconte.net/>. Most of the stories are available on the “Theater” page. Some have English scripts.

the marginalized participants’ Digital Stories, which empowers the creation of self-narrative through dialogue and story generation.

During these workshops, we focused on the role of facilitators to reveal the participants’ story seeds. Then we established a service-learning course at the Community Collaboration Center of Aichi Shukutoku University, and the students majoring in media studies were expected to act as facilitators and listen to the participants’ unvoiced experiences and thoughts to help generate their stories and produce videos.

2-2. Basic workshop method

During our workshop, we aimed to make story-generating possible using dialogues and game-like programs instead of writing scripts. We designed the workshop by keeping in mind the story-making theory proposed by Ohtsuka (2003). He proposed one antithesis of a storytelling theory from the perspective of the individuals’ confessions, which coincides with the Western or modern story theory. What has been cited here as the means of producing stories within non-Western or postmodern story-making theory is not the novel or film, but card games. With a card game, deconstructing experiences and impressions, and linking and combining them into stories are made easier. Moreover, they are directly experienced as physical actions. While the participants and facilitator students engaged in the dialogic card game, they would identify the hidden voice fragments and withdraw their story seeds. In addition, this deconstruction and construction method of storytelling employed

perspectives similar to the theories and practices of narrative approach⁷.

2-2-1. The “combining-photos-into-stories” game⁸

The “combining-photos-into-stories” game is an icebreaking, story-focused workshop. With this game-like program, each participant chose one photo from a diverse collection of photos relating to a single subject, such as a frog, or a piece of cake. The participant attached the photo to a base card and then partnered with another participant to create a story linking their two motifs; this was performed within a time limit. Simply attempting to link the two photos as-is would not have yielded successful results; however, by recording the symbols and connotations that sprang to mind while viewing the photos and writing these on sticky notes, which were then attached to the photos, participants were able to identify and visualize the structural elements of potential stories. Another intention of this

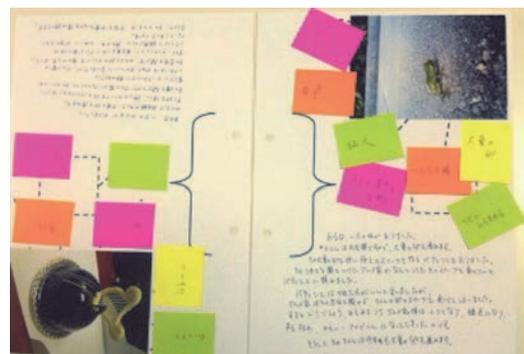


Photo 1 “Combining-photos-into-stories” game. Start from a frog and end with a piece of cake.

7 In narrative theories, story is often defined as “describing the plot of two or more events”. It means stories are generated by linking pieces of information. For more details, see Yamada (2000).

8 Workshop methods and tools are available at the website: <http://mediaconte.net/workshop>

program was to show the participants that storytelling practice was a freewheeling activity in which, unlike their schoolwork, there were no right or wrong answers.

2-2-2. Interview time

Starting with this program, each participant would move forward to generate his or her own story. First, five small cards were prepared. A single theme, such as “annoyances,” “my most memorable event,” or “my treasure” was written on each of them. These questions were intended to guide participants in voicing their experiences and thoughts. A facilitator placed one of these cards in the middle of a sheet of paper and asked questions related to the subjects on the card. The participant’s experiences and thoughts, which were voiced in response to the questions, were written on sticky notes and attached around the card; these served as motifs that could potentially generate a story. If the subject on the card did not seem to activate discussions, then the process was attempted again with a different card. Finally, if an interesting topic arose, the card in the center was replaced with a note recording the main topic or episode; this note was coupled with the sticky notes gathered from keywords during the question time and was used to assemble a story.

2-2-3. Storytelling by five picture cards

From the collected notes with key concepts written on them, participants and facilitators created the outline of a story by selecting notes and attaching them to five picture cards. On each card, a square for attaching sticky notes and some dots for main ideas were printed. Participants and facilitators put their notes with keywords on sheets of paper, and they wrote down keywords for each scene. After the outlines

of stories were presented, all participants and facilitators exchanged feedback—questions, – comments—and advice— about what kinds of photo images would be effective to use in the stories.

2-2-4. Storyboard productions and editing

This process began by printing the photos and attaching them to the picture-script cards, which included rough scenarios consisting of short sentences. Each picture scene required one or two sentences. Since it was much easier and more impressive, participants were encouraged to speak in monologues using a colloquial style, conversational tone. Finally, they combined the photos and voiceovers using Windows Movie Maker or iPad application software.

2-2-5. Preview and media coverage

Completed Digital Stories were screened at the conclusion of the workshop. The participant-facilitator pairs introduced their works prior to the screening. In order to share these stories with the local community members, most of the works were later broadcasted on local cable television.

2-3. Workshop results

Although we had to partially rethink and reform the program, it proved functional during each session. Every participant was successful in developing a story.

First, in each session, most of the story seeds were found in seemingly unimportant chats with facilitators about every day matters. The facilitators accomplished this through continual, diligent questioning, listening, and nodding, and by mobilizing the frameworks of their own interpretations. These interactive, game-like

sessions evoked participants’ motivation to self-disclose. For example, in the youngest participant’s case,⁹ a female student facilitator used a question card with the theme “Annoyances,” and she encouraged a boy’s complaints about chores and his brother by asking numerous questions, providing various options of how to combine identified story seeds, taking photos, and combining these elements that reflected their own past experiences. Achieved here were stories created together, with the teenagers and facilitators serving as catalysts for each other. In contrast, unlike the workshop with facilitators, the stories, which are generated without facilitators’ help, tended to be elusive. Also, in the case where we skipped the “combining-photos-into-stories” game, it took longer for participants to understand how to generate meaningful stories (Ogawa et al.2010). This proves the effectiveness of our card-game- like and conversational story-generating method (Ogawa & Ito, 2010; Ogawa et al., 2010; Ogawa et al., 2012; Mizojiri et al., 2012).

Second, our collaborative model encouraged participants to “re-present” their new story of self (Ogawa & Ito, 2010). “Self” came to be theorized as “a perpetually rewritten story (Bruner, 1991)” in cultural psychology, and the self-narrative is recognized as essential when a person constructs and reconstructs one’s identity. However, as narrative theories stipulate, people do not find it easy to write or rewrite their self-narrative without someone’s conversational help. In our workshops, many stories concerning the self were generated through the facilitator’s questioning, and selecting and connecting story seeds. Since our identities and those we attribute to others are relational and constructed in conversation (Gergen, 2009), the

dialogic “story-weaving” method proves to be very effective in empowering participants.

These new stories also help participants make sense of their lives. The participants pondered about their pasts and rethought their futures through the story-weaving process. In the case of young participants who created future self-stories, it seemed some of the dream stories actually came true.

Finally, as a side effect, the collaborative story-weaving workshop provides both participants and facilitators with a strong sense of empathy toward their workshop partners. In order to help generate the participants’ stories, facilitators were required to understand each participant’s unique situation. As stated earlier, the facilitators were required to listen to the participants’ voiceless thoughts, imagine the situation their partners were in, and try to interpret their narratives using their own past experiences; this called for them to demobilize their own frameworks and perspectives to understand others with different backgrounds. Printed photos were also effective in encouraging empathy toward others and to interpret the background situation of each participant. Through story-weaving processes, facilitators frequently interpreted what the partners desired to say by reflecting on their own experiences and feelings. Many student facilitators mentioned their newfound interest in news regarding the vulnerable groups with which they became involved.

2-4. Problems

Although the programs were primarily functional, the collaborative story-weaving model presented two problems. First, we absolutely

9 Their stories are available at the website: <http://mediaconte.net/theatre/?cat=8>.

needed the facilitators to maintain positive attitudes toward their participating partners. Without positive attitudes, interview sessions did not prove to be effective, and the story seeds were not properly gathered. In addition, the process worked best when the facilitator's background differed from that of the participant's. The differences seemed to raise more questions despite the fact that they had difficulties in understanding their backgrounds.

Second, since participants sometimes relied too heavily on the facilitators' help, which was especially the case with the more vulnerable participants, the facilitators tended to hold stronger initiatives when generating stories. This was inevitable to some extent, but the facilitator should always avoid too much interference.

3. In the case of Photo Karuta

3-1. General information on Photo Karuta

Photo Karuta combines photo-taking research with the making of a Japanese traditional card game, called "karuta." Even though it is not identical to DST, developed by the Center of DST in California and others, the Photo Karuta workshop guides participants in exploring a pre-story space and gathering story seeds. With this workshop, participants took photos and wrote short poems similar to haiku that related to each photo. These pair cards included the photo and

haiku, and were interpreted as a group of short and fragmentary digital stories. We referred to them as "story sprouts" in the pre-story space.

Karuta is traditionally a popular Japanese card game with roots dating back to a shell-matching game played among aristocrats of the Heian period (794-1185).¹⁰ Today, Karuta uses two types of paper cards: which are pairs of picture cards, or "e-fuda," and written cards, or "yomi-fuda." A yomi-fuda is written in a short poem of 17 syllables arranged in a 5-7-5 pattern, similar to a haiku.¹¹ A karuta set often consists of 46 pairs of cards, the same number of letters in the Japanese alphabet, called "hiragana." During the game, while a facilitator reads aloud the written yomi-fuda one by one, players attempt to snatch the e-fuda associated with it from among all the other cards before the other players can. The player who gains the highest number of e-fuda is declared the winner. A karuta set has a single



Photo 2 Photo Karuta

10 The Japan Kyoto Karuta NPO introduces history and basic description of karuta. See <http://www14.plala.or.jp/hpmsmiki/englishpage.html>.

11 Haiku is a form of traditional short poetry with 17 syllables in Japan. As a conservative rule, it requires a season word "kigo" and focuses on natural subject matter. "Senryu" is also a form of poetry written with the same number of syllables without a kigo, and deals with humor and human nature. Now, however, senryu features appear in haiku, and the differences are sometimes blurred. In the Photo Karuta workshop, it did not matter if the strict rule was followed, so the students wrote the haiku in freer way.

theme, such as proverbs, dialects, historical figures, local specialties, and so etc. Therefore, karuta is often played among children as an educational exercise to grasp fundamental knowledge home and in schools. Kids enjoy using the game to learn. Additionally, because of its popularity, karuta is often designed to promote local culture. One of the well-known examples is “Jomo karuta,” which was made to introduce historical characters, famous locations, and products of Gunma, one of the prefectures in Japan. Citizens participate in large competitions each year.

3-2. Basic workshop method

During the Photo Karuta workshop, participants tried to make the karuta themselves to introduce their local places. They took photos for the picture cards and wrote haiku on the written cards. In the process of making the karuta sets, participants used their individual perspectives to discover charming points of these locations. Because this activity resulted in 46 pairs of photo-haiku cards, it had the potential to produce 46 story sprouts.

Since 2008, Photo Karuta has been used in the course “Watashitachi no Hiroshima-Photo Karuta dukuri (Rediscovering Our Hiroshima-A Photo Karuta Production),” which is an active learning programs at Hiroshima University of Economics. The course aims to enhance planning abilities and other social skills, such as cooperation and presentation. For six years, we have made karuta cards for local towns and islands in Hiroshima prefecture: Hiroshima-shi, Okunojima, Miyajima, Osakikamijima, Onomichi-shi, Sandankyo Valley, and Osakikamijima. Every year, there are about 20 to 30 attendees, divided into four or five groups comprised of three or four members. Each group

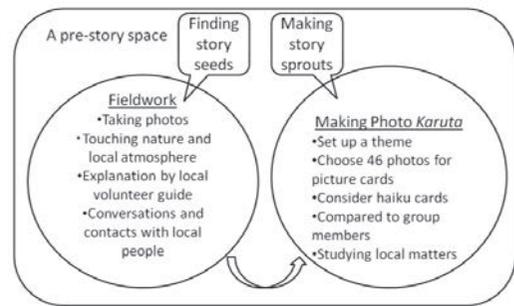


Figure 1 Design of Photo Karuta workshop

makes a karuta set consisting of 46 pairs of cards. The groups are required to establish one unique theme for their karuta based on the attractions that they find from the field.

Figure 1 displays the full design of the Photo Karuta workshop as a pre-story space. To find story seeds, participants visited a location and photographed eye-catching scenes, while experiencing nature and the local atmosphere. They also heard explanations given by a local volunteer guide, and held conversations with locals. After that, participants attempted to generate story sprouts by creating Photo Karuta according to their set theme. This process included: choosing 46 photos for the picture cards and printing them, considering haiku for the written cards by finding adequate words to match the photos, comparing their works with group members to modify them, and studying local matters. Through these activities, they found and expressed various attractions relating to the location.

3-3. Workshop results

3-3-1. Story sprouts generated in the workshop

Story sprouts, that is, pairs of karuta cards generated by participants, were multi-faceted and richly expressive. They were divided into four categories: description, knowledge, thoughts,

and imagination.

The first category, description, described and explained scenes and people that students took notice of while working at the location. For example, one photo card captured an image of autumn maple leaves turning fiery red. On the paired haiku card, the student wrote a realistic and rhythmical poem: *Very red, autumn leaves, very red* (This text is translated to English by Tsuchiya. The same applies to the following haiku). Another example of a card included the words: *On the canvas, a gentleman draws, also autumn leaves*. This haiku described a photo of colored leaves at a valley and an elderly man who sat riverside to paint those leaves.

The second category of karuta card provided knowledge relating to the area, including information and history that the student learned while working at the location. It was based on the participant's thoughts and interests during activities. As an example, the following haiku introduced the biological reason why the waterfall appeared red, taught by the local guide. *Such a mysterious, red color of waterfall, the reason is bacteria*.

The third category included the thoughts and emotions that came to mind when the students took the photos, listened to others, and explored the nature. These were not merely explanations of what they saw and heard, but were expression of their thought processes. On a photo card depicting a flower and autumn leaves in a valley, students wrote the haiku: *It is the lovely, the forgettable flower, blossoms quietly*.

The fourth karuta category included the imagination and inspiration that the participants drew when they were inspired by the photo cards. It allowed for a freer mind than category three, and the objects and scenes shown on the

photos were not directly related to the haiku's messages. For example, seeing a photo of a scenic waterfall, a student wrote the haiku: *I feel ridiculous myself, why I was worrying, until midnight yesterday*. The writer did not mention the waterfall at all, but, instead, wrote what came to her mind as she witnessed the natural creature. Taking photos of the waterfall reminded her of everyday annoyances and awakened her to its minuteness.

3-3-2. Narratives composed from 46 story sprouts

During the workshop, as mentioned earlier, each group was required to set up one theme for their karuta, which specified an attractive feature that the group discovered while visiting the location. In a completed karuta set, the theme was elaborately depicted by 46 story sprouts with various expressions of individual members. This proposed theme acted as a unique local narrative relating to their original view, which was collectively and collaboratively weaved.

In the case of the karuta created from the Sandakyo-valley in 2012, five groups of students specified their themes: 1) the healing effect of the visit, 2) a romantic location for dating, 3) rich history built by people's endeavors, 4) a charming combination of many natural aspects, such as the sounds of a river, fresh air, scenic valleys, and autumn leaves, and 5) an enjoyable place for children. During the workshop, varied narratives were raised, composed of diverse images and words proposed by each group.

3-3-3. Effectiveness of the workshop design

With the design of this Photo Karuta workshop, we focused not only on dialogues but also on experiences to gather story seeds. The

photographing activity allowed participants to easily discover their interests and individual points of view. Moreover, the photos were effective when the participants were asked to reflect upon and evoke their associated ideas. Additionally, visiting the location for the fieldwork caused the participants to feel the experience through their bodies; that is, they not only were able to see the field, but they were also able to hear, smell, touch and taste the experience. Those experiences facilitated participants to more sensitively perceive and to create haikus, story seeds, and sprouts as categorized in 3-3-1.

Surely, it is relatively easier to develop story sprouts - pair cards of the photos and the haiku - than rationalized stories. For vulnerable people, the ease of story sprouts acted as effective starting points to raise their voices freely. Moreover, a form of karuta does not have a linear storyline, but can generate unique narratives as a whole based on the 46 story sprouts. It may aid in the discovery of local features and attractions in a wider perspective. In addition, the story-making process was more interactive and community based, allowing the participants to help each other.

The form of karuta could be interpreted as “cool media” that Marshall McLuhan named media which demand audience participation (McLuhan, 1994=1964). A haiku is a very short poem and requires readers to use their imagination to make sense of the words. Karuta, which is an aggregation of such haikus and images, is considered to be cool media as well. The form asks players to read between the cards, and to interpret and appreciate local attractions while enjoying the game.

4. The story-generating model from pre-story space

By reflecting and examining both activities of Media Conte and Photo Karuta workshops in accordance with the concept of the pre-story space, we elaborated a model to generate stories for vulnerable people. The extracted model is shown in Figure 2. Both workshops, basically followed three steps when weaving these stories: 1) pick up story seeds, 2) select and classify the story seeds, and 3) transform the seeds of stories into coherent stories.

In the case of Media Conte, participants picked up story seeds from their memories and internal voices through a workshop exercise called “interview time.” Through conversation with facilitators, they were inspired by the use of question cards. In the next activity, “storytelling with five picture cards,” story seeds were selected, classified, and arranged in a timeline, and edited into a story. In the Photo Karuta workshop, story seeds were picked up from field experience. The photos, knowledge, and memories participants gained on location played a role in gathering story seeds. To make karuta

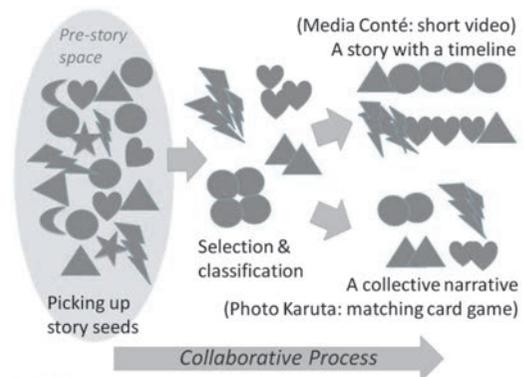


Figure 2 The model of story generation from pre-story space

cards and story sprouts, they selected and classified those seeds. Though the process of reflecting on their experiences and creating photo-haiku pairs cards, they established a theme of locality. At last, a collective narrative was weaved from a completed karuta card set.

These two workshops resulted in different story forms; one was a short video story, and the other was a matching card game. However, there is commonality in the basic process of deconstruction and construction, as well as story weaving from story elements based on collaborative works among participants and others. In both workshops, each story element, namely seed, is visualized by using sticky notes, cards and photos. Therefore, thoughts and images in a storyteller's mind become visible, which allows facilitators and other participants to share ideas and advise about making a story and how to edit and show it. This visualization of story seeds enables the collaboration among participants in all steps. It helps storytelling for vulnerable people.

5. Towards further research

As is propounded in Western practices, does every person really have a story to tell? The careful answer is that every person might not have a story, but story seeds might be in and around themselves, hidden in pre-story space. In short, as we examined, our model proved to be generally effective for digital stories creation, and showed the potential of designing workshops in multiple ways and for various groups of people.

We found that a side effect of the workshops included the fact that these haiku-like short stories or story sprouts of Photo Karuta could evoke audience engagement. Since the stories were created through card-games, some of the

stories were not complete "stories" in terms of the causal nexus that is usually required for coherent stories. However, the audiences were required to read "between the lines" and use their experiences or imaginations to appreciate the laypeople's Digital Stories (Media Conte) or the developed Photo Karuta. In the case of Media Conte, through a collaborative story-weaving process, student facilitators were frequently required to "read" participant's utterances, photos, and narratives using their knowledge and experiences. Through these reflective processes, a facilitator and a participant co-created the participant's self-narrative, which proved to be important to one's identity, and it helped them to gain empathy. On the other hand, making and playing with a set of Karuta might inspire people to see a story world in their mind.

In addition, the process of collaborative story generation and appreciation of sprouted poem-like stories may invite audience members not only to engage in the interpretation of the stories, but also to generate further stories in their own minds.

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A Study of Change of the Body View in Cyberculture

Keywords:

early cyberculture, contemporary cyberculture, view of the body, Deleuze's perspective

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Abstract

According to the French philosopher Gilles Deleuze, “art” actualizes the “virtual (possible)” which is latent once the world is organized by a fixed method and that “philosophy” conceptualizes the “virtual (possible).” In other words, *art* and *philosophy* are regarded as suitable for grasping new experiences that are different from the ones under the existing socially constructed order.

From this perspective, first of all, this paper shows that although early cyberculture describes a utopia of the near future where escape from the body is realized by technologies (as seen in William Gibson's *Neuromancer*), expressions of new experiences of bodies in our everyday life have become an important part of cyberculture nowadays. Contemporary cyberculture like some kinds of gameplay or cyborg performances contains the actualization of new experiences of bodies in our society with the spread of the electronic environment.

Secondly, this paper examines new experiences of bodies in our society after the spread of electronic technologies based on some game studies and art commentaries. Recently, some game studies and art commentaries have analyzed new experiences of bodies in contemporary cyberculture. According to those studies and commentaries, new experiences of bodies are not only mental and emotional but also physical as well. Selves that appear in the electronic media are not based on the release from the biological body but the *reconstruction* of the biological body. The new experiences are crucial in making a re-examination of the framework of the biological body and opening up infinite possibilities for interpretation of bodies. Those possibilities invite rethinking and reconstructing the existing order related to the biological body.

1. Introduction

According to the French philosopher Gilles Deleuze (Deleuze and Guattari, 1994), “art” actualizes the “virtual (possible)” which is latent once the world is organized by a fixed method and that “philosophy” conceptualizes the “virtual (possible).” In other words, *art* and *philosophy* are regarded as suitable for grasping new experiences that are different from the ones under the existing order; the socially constructed relations or structures which include various exclusions or repressions.

At least a part of cyberculture can be considered as *art* from the viewpoint of Deleuze since it actualizes new experiences of bodies in our society with the spread of electronic technologies. First of all, this paper explores which kind of cyberculture actualizes such new experiences of bodies by studying its early expressions such as William Gibson’s novels and its contemporary expressions like some kinds of gameplay or cyborg performances.

Secondly, this paper illustrates a new trend of the body view in cyberculture by analyzing new experiences of bodies in our society. This paper also suggests what such trend of the body view would bring to us.

2. Early Cyberculture and Contemporary Cyberculture

It is difficult to define the range of cyberculture because it is ambiguous and complex. However, we can assume that a change has occurred in cyberculture after the late 1990s. We can see such change in the arguments of Mark Dery and Pramod Nayar.

Dery divides the main domain of cyberculture

into visionary technology, fringe science, avant-garde art, and pop culture (Dery, 1992). These four areas are in the realm of subculture. Therefore, it seems that early cyberculture developed outside of the mainstream culture. On the other hand, Nayar states that “cyberculture is the electronic environment where various technologies and media forms converge and cross over: video games, the internet and email, personal homepages, online chats, personal communications technologies (PCTs, such as the cell phone), mobile entertainment and information technologies, bioinformatics, and biomedical technologies” (Nayar, 2010: 1). Nayar defines cyberculture as the mainstream in our society. Currently, cyberculture constitutes a major part of our everyday life. This section divides cyberculture into two periods (early cyberculture and contemporary cyberculture) to explore the development of the body view.

2-1. William Gibson: The Desire for a Near-Future World

Dery focuses his attention on the cyberpunk movement, especially *Neuromancer*, a novel written by William Gibson in 1984 (Dery, 1992). The novel describes a *near-future world* in which information technologies and biotechnologies have become highly developed. This world includes cyberspace as its core image.

The term ‘cyberspace’ was coined by Gibson to characterize “disembodied space” (Brians, 2011: 121) that provided “bodiless exultation” (Gibson, 1984: 6). This characterization had a decisive influence on the image of *cyberspace*, especially before the widespread use of computers and the internet. In Gibson’s *Neuromancer*, the protagonist, Henry Dorsett Case had been a hottest computer “cowboy” who had invested in cyberspace’s

“disembodied consciousness” and the sharpest data-thief in the Matrix (Gibson, 1984: 5). However, he stole data from his employers. As a punishment for the theft, Case lost the capability of a “cowboy.” For Case, it was “FALL” (Gibson, 1984: 6) because it prevented him from accessing the “bodiless exultation” of cyberspace. For this console “cowboy,” his body was “meat” and Case became a prisoner of “his own flesh” (Gibson, 1984: 6). In cyberspace of Gibson’s *Neuromancer*, intelligence is separated from the body, and the immaterial intelligence can manipulate data.

2-2. The Desire to Escape the Body: Early Thoughts of Cyberspace

In Gibson’s *Neuromancer*, cyberspace of a *near-future* world is realized by utilizing a special electrode to connect a computer with a brain. The novel can be interpreted as an attempt to describe a *wishful near-future* in which technologies realize the desire for escaping from the body. However, this attempt is not the actualization of different understanding of the body from the one under the existing order. In other words, it is not *art* as defined by Deleuze. The reason is that we can see the body-mind dualism, or the concept of ultimate transcendence of the body in Gibson’s cyberspace, which is traced to “Christianity, Platonic Idealism, or the mechanic Cartesian universe” (Brians, 2011: 123). In early cyberculture, the vision of cyberspace is deeply rooted in Western thought.

Gibson recognizes such body-mind dualism in his works. According to him, the dualism is influenced by the British writer, D. H. Lawrence (Tatsumi, 1997). Lawrence states that the mind-body split in Western thought has created countless problems in Western culture (Tatsumi, 1997).

Don Ihde refers to such thought of early cyberculture as a “technofantasy” (Ihde, 2002). The fantasy is characterized by “the desire to escape the body” and “the belief that cyber technologies (however these are conceived) will make this escape” possible (Brians, 2011: 122). This idea of transcendence of the body and its material limits is frequently found in the image of cyberspace of early cyberculture.

Ingrid Richardson and Carly Harper call such transcendent thinking a “fleshless ontology of cyberspace” (Richardson and Harper, 2001: online). According to Richardson and Harper, Gibson’s cyberspace is a “representation of the possibilities of disembodiment facilitated by virtual systems” (Richardson and Harper, 2001: online). “Within this hierarchical framework the body exists as a lower-order mechanism,” and it is distinguished from the “ontologically superior and potentially autonomous mind” (Richardson and Harper, 2001: online). “The teleology of cyberspace” is exactly the “final non-necessity of the body,” or “achieving a mode of existence that can do without the body” (Richardson and Harper, 2001: online). In other words, they point out the underlying implication that the corporeal form is unnecessary.

Whether it is called a “technofantasy” or “fleshless ontology,” the imagery of cyberspace in early cyberculture is founded on the belief that technologies can enable transcendence of the body. However, such dualistic thinking which is deep-rooted in Western thought is far from the actualization of new experiences which are covered by the existing order.

When the Japanese translation of the novel “Idol” by Gibson was published in 1996, Hiroki Azuma argued that there was a certain “oldness” in the future images and the view of information

technology of Gibson's works (Azuma, 2000). We can suppose that such "oldness" was not only due to the fact that Gibson's concept of a *near-future* information society had already become a part of our everyday life because of the widespread use of computers and the internet, but also due to the fact that Gibson's imaginative power was based on the dualistic thought which had permeated the tradition of Western culture deeply. In other words, we can assume that because the imagery of a *near-future* information society became a part of our everyday life and gave no great excitement, some of the readers in the late 1990's like Azuma found the mind-body dualism of Western cultural tradition, and felt the "oldness" in the Gibson's works.

2-3. Contemporary Cyberculture

Gibson's works are still popular and influential for contemporary cyberculture. It cannot be validly concluded that we can no longer see the desire for escaping from the body or the praise of the escape from the body in cyberculture. However, the argument of Azuma suggests that we can also find a new trend in cyberculture after the late 1990's.

As we have discussed, Nayar defines cyberculture as "the electronic environment where various technologies and media forms converge and cross over" and cites video games, the internet and email, personal homepages, online chats, personal communications technologies (PCTs, such as the cell phone), mobile entertainment and information technologies, bioinformatics, and biomedical technologies as examples. According to "*Daijirin*," a Japanese dictionary, "cyberspace" is described as "virtual space which comes into existence in electronic media such as computer networks. In particular,

the media environment is created by bringing human's body consciousness and the electronic media together" (*Daijirin*, Daisanhan, 2006). The use of this word has become widespread in Japanese society and it is an example of how computer technology has become a part of our everyday life. Such definition and explanation of the word correspond to the situation in which computer networks have entered into our real life.

With the spread of the electronic environment in our society, contemporary cyberculture contains the attempts to express new experiences of bodies. For example, according to an interview with Sterc by Joanna Zylińska and Gary Hall, his cyborg performances reveal that the body "has now been invaded by technology" and it is "what we've always been and what we have already become" (Zylińska, 2002: 115). Based on this comment, we can conclude that cyberculture has developed to show how we grasp bodies through living in a society with electronic technologies.

The studies of such cyberculture are referred to as *new media studies*, which are distinguished from the earlier version of media studies that analyzes culture with other types of media prior to creations of our electronic society. In such new media studies, we understand our relation to the media with terms such as "interactive users," "experience," "immersion," "simulation," or "ubiquitous media" (Dovey and Kennedy, 2006: 1-21).

2-4. Preceding Cyberculture Studies

Previous cyberculture studies in the 1980s and the early 1990s, for example works of David Tomas or Dery, analyze early cyberculture focusing on the desire for "disembodied consciousness" in cyberspace (Tomas, 1989; Dery 1992). However,

cyberculture studies after the late 1990s analyze a new trend in cyberculture drawing attention to new experiences of bodies. For example, John Dovey and Helen Kennedy examine body experiences of game players (Dovey and Kennedy, 2006). Some art commentaries explore understandings of body experiences in digital performances (Zylinska, 2002).

It is important to consider such new trend in contemporary cyberculture because it actualizes new experiences of bodies in our society with the spread of electronic technologies. Our next step is to conceptualize the experiences of bodies based on new insights of cyberculture studies.

3. The New Trend of Cyberculture

Cyberculture has a new trend in expressing body experiences after the late 1990s and *new media studies* have developed in correspondence with the trend of cyberculture. This section explores how new media studies describe new body experiences to conceptualize the experiences.

3-1. Allucquère Rosanne Stone's Argument

In her book, Allucquère Rosanne Stone analyzes the integration and dissociation of selves and bodies in cyberspace, and treats the history of communication technologies from the viewpoint of "the tensions between selves and bodies and the play of their interactions, separations, and fusions" (Stone, 1995: 88).

In the historical analysis, Stone argues about the integration and dissociation of selves and bodies from the viewpoint of technologies "mediating between bodies and selves that may or may not be within physical proximity; i.e., *interfaces*" (Stone, 1995: 89). Stone asserts that before electronic communication emerged, "an

agent maintained proximity through texts bearing the agent's seal, and the agency the texts implied could be enforced through human delegates" (Stone, 1995: 96). However, in the time of electronic speech, that is, when the telephone appeared, proximity started to be "maintained through technology," and the agency became "invisible" (Stone, 1995: 96). When users of the telephone took for granted that they talked with others on telephone, they had the sense of assurance in the presence of "a specific bounded unitary agency" (Stone, 1995: 97) based on a voice, and the meaning of proximity has gradually been reconstituted.

Regarding the "specific unitary agency," Stone discusses that it is "a political, epistemological, and biological unit that is not only measurable and quantifiable but also understood in an essential way as being *in place*" (Stone, 1995: 90). In addition, she states that an "individual societal actor becomes fixed in respect to geographical coordinates that determine physical locus" (Stone, 1995: 90). The geographically fixed body has been privileged as a place of political certification or a political action because the individual societal actor is connected to the agency, that is, the self which is socially constituted as a "politically authorized" persona in the sense of Stone (Stone, 1995: 96).

Furthermore, according to Stone, whereas proximity of the agency was achieved through appearing of the justified body by technologies at the time of an electronic speech on a voice, electronic technologies based on iconic representations appeared and the agency became to be on the "iconic representation of a voice" (Stone, 1995: 97). Stone discusses this reconfiguration of the meaning of proximity of the agency as follows: "This process of changing the relationship between agency and the authorizing body into a discursive one

eventually produced the subjectivity that could fairly unproblematically inhabit the virtual spaces of the nets” (Stone, 1995: 97).

Stone states further that if “we consider the physical map of the body and our experience of inhabiting it as socially mediated, then it should not be difficult to imagine the next step in a progression toward the social—that is, to imagine the *location* of the self that inhabits the body as also socially mediated” (Stone, 1995: 92). This means that we can think of the self “in terms of position within a social field or of capacity to experience, but of the *physical* location of the subject, *independent* of the body within which theories of the body are accustomed to ground it” (Stone, 1995: 92). In other words, we come to think of subject construction within “a system of symbolic exchange, that is, information technology” (Stone, 1995: 92).

3-2. Bodies of Selves in Cyberspace

As mentioned above, according to Stone, by focusing on the “tensions between selves and bodies and the play of their interactions, separations, and fusions,” we can understand the self that moves by a different order of vectors in a network of information exchange, or the self that moves in a space in which the privileged body is excluded.

Apparently, in Stone’s interpretation, selves in cyberspace do not have physical bodies. However, Stone describes a virtual community as follows:

The participants learn to delegate their agencies to body representatives that exist in imaginal spaces contiguously with representatives of other individuals. They become accustomed to what might be called lucid dreaming in an awake state— to a

constellation of activities much like reading, but an active and interactive reading, a participatory social practice in which the actions of the reader have consequences in the world of the dream or of the book. The older metaphor of reading undergoes a transformation in a textual space that is consensual, interactive, and haptic, and that is constituted through inscription practices—the production of microprocessor code. The boundaries between the social and the “natural” and between biology and technology take on the generous permeability that characterizes communal space in the most recent virtual systems.

(Stone, 1995: 121)

In the aforementioned paragraph, Stone suggests that selves in cyberspace, that are given body representatives, have consensual, interactive, and haptic experiences. These experiences are the ones in which the boundaries between the social and the “natural” as well as the biological and the technological permeate. That is, Stone does not conceive selves in cyberspace to be free from physical bodies. On the other hand, she believes that selves in cyberspace are based not on the biological bodies, but on the *reconstructed* bodies by interacting with technologies.

However, according to Stone, “much of the work of cyberspace researchers, reinforced and perhaps created by the soaring imaginary of William Gibson’s novels, assumes that the human body is ‘meat’—obsolete, as soon as consciousness itself can be uploaded into the network” (Stone, 1991: 452). Certainly Tomas states in his paper on cyberpunk that “jacking in’ to cyberspace” is the “instantaneous rite of passage that separates body from consciousness,” and that the

“disembodied human consciousness is then able to simultaneously traverse the vast cyberpsychic spaces of this global information matrix” (Tomas, 1989: 137). Furthermore, Donna Haraway, in her dialogue with Takayuki Tatsumi, argues that in the circulation of Gibson’s works, we can see the “praise of the escape from limits and abstraction without the concrete” (Tatsumi, 2001: 255). At least we can observe that a kind of cyberpunk praises cyberspace as a world of consciousness that has seceded from the body.

What kind of body experience do selves in cyberspace have? Is it seceded from the physical body, or is it based on the reconstructed body? As mentioned earlier, Stone considers that selves in cyberspace are not seceded from physical bodies and many researchers agree with her idea (Haraway, 1991; Friedman, 1999; Ryan, 2001; Dovey and Kennedy, 2006).

3-3. Experiences of Game Players

Recently, Dovey and Kennedy have analyzed experiences of game players, using Haraway’s image of the “cyborg” (Dovey and Kennedy, 2006). According to their analysis, experiences of gameplay are not only mental and emotional but also physical. Their analysis, similar to the one by Stone, argues that selves that appear in the electronic media are not released from physical bodies, but are still based on the reconstructed body by interacting with technologies.

In addition, they state that the phenomenological method helps us understand that “we are embodied subjects whilst engaged in our experiences of ‘virtual reality’” and that “we are also re-embodied and gain a sense of presence and agency in these virtual spaces through the interface and the avatar” (Dovey and Kennedy, 2006: 106). Their analysis of gameplay suggests

that experiences of gameplay are not disembodied but physical. Such experiences, which are understood to be *immersive*, differ from those that Gibson portrays in *Neuromancer*. Recently, game studies have shown that the virtual world of cyberspace cannot be characterized by the body-mind dualism.

3-4. Attempts of Art

According to Ella Brians, the important pressure for reconstructing the image of cyberspace came from the world of art (Brians, 2011: 125-126). For example, Monica Fleischmann, an artist and theorist engaged in phenomenological studies, discusses how the body interacts with technologies or environments and uses digital interfaces as a “playful interaction of bodies, art and technology” in “opposition to the theory of the disappearing body” (UNESCO Digital Art Portal, 2013: online). Furthermore, the concept of “mixed-reality” is applied instead of virtual reality to understand the relation to cyber technologies more properly (UNESCO Digital Art Portal, 2013: online). According to Brians, this concept of “mixed-reality” expresses that “material bodies, their virtual representations, the human imagination, and computer hardware and software all interact to produce a reality that has both ‘material’ and ‘virtual’ elements” (Brians, 2011: 125).

Sterc, who performs using electronic technologies and comments on his performances in various ways, is known for his thesis “the obsolete body” (Zylinska, 2002). Although it is often believed that this thesis presents disembodied consciousness, he criticizes such an interpretation. According to Sterc, the body is “obsolete in form and function. But we cannot operate disembodied. We cannot discard the

body” (Zylinska, 2002: 121). He also states, “This body is not in a kind of Cartesian theatre of ‘I’ as opposed to ‘my physical body’ ” (Zylinska, 2002: 121), and that the question concerning the thesis is “not so much whether we discard bodies but rather how to rethink the design of the body” (Zylinska, 2002: 122). The performances of Sterc suggest that we begin to reconstruct the body view in our society based on the electronic environment. Thus, the body of his performances actualizes the “virtual (possible)” which is covered by the existing order (Deleuze and Guattari, 1994).

4. Social Reconstruction of the Framework of the Body

As stated earlier, the analysis of game players by Dovey and Kennedy reveals new body experiences in our electronic environment. Dovey and Kennedy argue that “these ‘other cyborgian selves’ that we perform in our play have an important personal, social and cultural significance” (Dovey and Kennedy, 2006: 116). They state that the “performed selves made possible by the cybernetic process of gameplay offer us the opportunity to explore alternative subjectivities and to engage in different kinds of affective experience, where embodiment and possibilities are defined by different rules to those imposed in real lives” (Dovey and Kennedy, 2006: 117). According to them, in “multiplayer role playing we can imagine a world without our existing racial hierarchies and experience inclusion and affiliation on the basis of technicity alone—unsullied by ethnic, gender or class prejudices, or disabilities” (Dovey and Kennedy, 2006: 117).

Furthermore, they mention that the access to

gameplay includes a certain “freedom of movement,” that is, “a sense of agency and mastery not necessarily available in their everyday lives” (Dovey and Kennedy, 2006: 117) quoting Taylor’s study on the women players. Here, it is clearly demonstrated that the pluralization of the self through cyberspace can be an important opportunity for rethinking and reconstructing the existing order. The self in cyberspace can be free from the restrictions imposed by being connected to the biological body in real life. Such a self permeates into real life and makes re-examination and reconfiguration of the existing order possible.

The argument of Ernesto Laclau and Chantal Mouffe explains this possibility. According to Laclau and Mouffe, the category of “subject” means “‘subject positions’ within a discursive structure” (Laclau and Mouffe, 2001: 115). The “various positions cannot be totally fixed in a closed system of differences” (Laclau and Mouffe, 2001: 115). “The non-fixation or openness of the system of discursive differences is what makes possible these effects of analogy and interpenetration” (Laclau and Mouffe, 2001: 117). Thus, “the presence of the *Other* prevents me from being total myself” and “it is because a peasant *cannot* be a peasant that an antagonism exists with the landowner expelling him from his land” (Laclau and Mouffe, 2001: 125). In our context, we cannot be totally a *woman*. In this case, it is the presence of a *man* that prevents one from being totally a *woman* and it allows her to rethink and reconstruct the existing gender order.

The selves that have a possibility of reconsidering and remaking the existing order of real life are exactly the *cyborgian selves* whose bodies are reconstructed by permeating their boundaries with machines and therefore are not

based on the biological understanding. This new body experience creates the possibility of re-examining the framework of the biological body as well as the restrictions imposed by the framework.

To put it another way, those selves in cyberspace have experiences in which the biological body can no longer represent *truth*, or *reality*. Such experiences lead us to the recognition that not only the concept of the self that is based on the biological body, but also the framework of the biological body is merely “only one form of our knowledge” (Scott, 1999: 10) through our interaction. Those experiences bring us the recognition that the framework of the biological body itself is only socially constructed. Furthermore, because such recognition opens up infinite possibilities for interpreting bodies, it urges us to rethink and reconstruct the existing order related to the biological body.

As stated in the introduction, this paper is based on the idea that *art* and *philosophy* actualize the possibilities in the world that are hidden under the existing order. With regard to this, it is necessary to emphasize that *art* and *philosophy* do not actualize the origin and the real existence behind the existing world. They actualize the ongoing process and the flow of the world itself (Deleuze and Guattari, 1994; Colebrook, 2002).

5. Conclusion

First, this paper has illustrated that although early cyberculture describes a utopia of the *near-future* where escape from the body is realized by technologies, more recently the attempts to actualize new experiences of bodies in our electronic environment have become an important part of cyberculture. Secondly, this

paper has argued that such new experiences make the re-examination of the framework of the biological body possible as well as the restrictions imposed on the biological body. In other words, such experiences provide infinite possibilities for interpreting bodies. Those possibilities for interpretation of bodies open the doors for rethinking and reconstructing the existing order related to the biological body.

In this paper, we have considered cyberculture from the viewpoint of Deleuze regarding *art* and *philosophy*. Hereafter, I wish to focus on *art* that reveals experiences of bodies which are covered by the existing order, and additionally to attempt to conceptualize the experiences by *philosophy*. Moreover, I would like to correlate such philosophical analysis with actor-network theory that evolved from the works of Michel Callon and Bruno Latour (Kawamura 2008).

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Editor's Notes

We are very pleased to announce the publication of Volume 7 of the Journal of Socio-Informatics. This is the first electronic edition of an academic journal from SSI, Japan. Our goal is to ensure open access to the journal through the Internet.

As a result of the peer review process, at a rate of 57.1%, four of seven submitted prepublication papers have been accepted.

The development of Information and Communication Technologies (ICTs) has dramatically created new hypermedia environments throughout our life space, which may lead to a change in our contact behavior as well as in the roles of various media. While having different subjects and approaches for their respective studies, the papers accepted in the current volume investigate a variety of issues associated with the surrounding old and new media environments in our lives. Through further experimental and theoretical studies, we will continue to determine the causes of social problems resulting from the diffusion of ICTs, and to ascertain both the social and economic impacts of ICTs through the contribution of articles that we publish.

Finally, the CFP of next volume of JSI is available on <http://www.ssi.or.jp/eng/>.

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