Global Focus on Knowledge Lecture Series 2010

The University of Tokyo
Interfaculty Initiative in Information Studies
Graduate School of Interdisciplinary Information Studies

Yoshiaki Hashimoto

2010.6.17/6.24

Professor Yoshiaki Hashimoto's Profile

(Socio-information and Communicaiton Studies Course
at the Interfaculty Initiative in Information Studies)

Academic Specialties:

- Communications Theory
- Information Behavior Theory
- Social Psychology
- Sociolinguistics

Content of Principal Research

- (1) Communications Understanding Process/Content Analysis

  Theoretical research which, while incorporating research results from the fields of pragmatics, sociolinguistics, cognitive psychology, etc., considers the methodologies for analyzing the mechanisms for the transmission/understanding of verbal and non-verbal signs and messages.

  [Publications](Unofficial English titles)

  "*Faulty Communication: Irony, Metaphor and Implicature*", Keiso Shobo
  "*Introduction to Communications Theory*"(editor), Taishukan Shoten
  "*Techniques of Message Analysis*" (joint translation, Keiso Shobo

- (2) Analysis of the Relationship between Changes in the Information Environment and Cognitive Capacities

  Conducted analysis from both theoretical and empirical standpoints on how changes in an information environment influence communications-related cognition capabilities, such as language development, as well as language behavior, etc. For example, consideration of what impact the new visual media have on the development of nursing children, and how changes in the information environment are affecting the character formation of the younger generation.

  "Visual Media and the Brain—A Physiological Approach to Television Images and the Cerebrum" in *Mass Communications Research,* No. 46

Content of Principal Research (2)

- (3) Social Psychology Analysis of Information Behavior

  Empirical analysis of how "information behavior" in the form of media use behavior, interview communications behavior, etc. actually changes in line with changes to the information environment and what are the social psychological factors related to those changes.

  "*Media Communications Theory*"(joint editor), Hokuju Shuppan
  "*Information Behavior and Social Psychology*"(editor), Hokuju Shuppan
  "*Media Communications* Studies"(editor), Taishukan Shoten
  "*Birth of the Neo Digital Native*"(Yoshiaki Hashimoto + Dentsu), Diamond Inc.

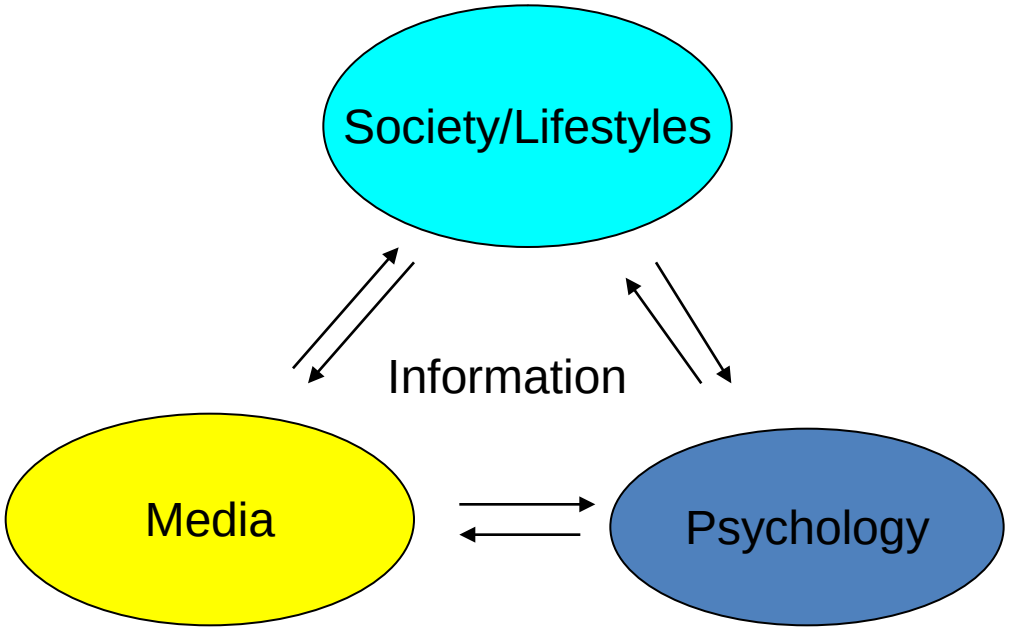
- (4) Comparisons of Intercultural Communications concerning Differences in Strategies for Pragmatics, etc.

  Cites knowledge from communications research concerning conditions of intercultural interchange in attempts to apply empirical studies to practical issues.

  Video "*A Near but Far Country –Current Communications between Japanese and South Korean Youth*" (project commissioned by the Foreign Ministry)
  Video "*Widening Connecting The World of Children – A New Age for Japan-South Korea Interchange*" (project commissioned by the Foreign Ministry)

“Information Social Psychology” in a Nutshell

Communication Dynamics



“Net Users’ Psychology and Behavior”

Global Focus on Knowledge Lecture Series

Instructor: Yoshiaki Hashimoto

(1)6/17 The Internet and the Cannibalism of the Media

(2)6/24 Changing Media Environment and Mentality of Japanese Youth

（6/17）Internet and the Cannibalism of the Media

—Verifying with data changes in the information behavior of the Japanese

-Is the Internet encroaching on TV?

Overview of Base Survey

○"Japanese Information Behavior 2009"

Joint research by Yoshiaki Hashimoto and Dentsu

- Diary-type survey + Questionnaire survey

  Survey Locations　Nation ide (157 locations)

  Survey Target Population　Males/Females ages 13~69　N=1, 490

  Two-stage stratified random sampling based on the Basic Resident Registration Card

  Home visits by research staff to collect questionnaires

  Survey Period　June 2009

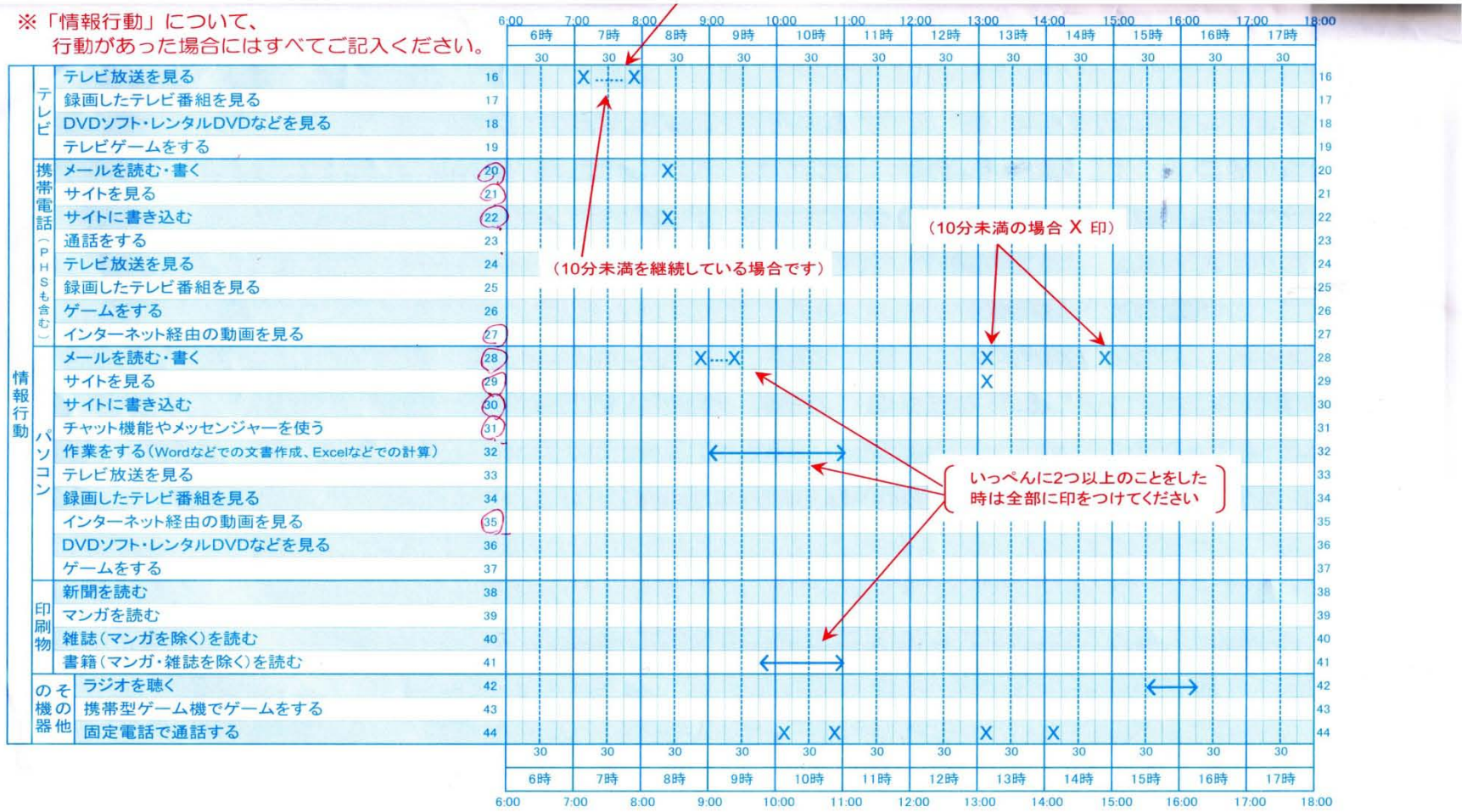
  Diary-type ~ at home (7 items), lifestyle behavior (8 items),

  Information behavior (29 items) entered into 15 minute cells (in any case where there is less that10 minutes, a check mark is placed next to it and it is counted as 5 minutes)

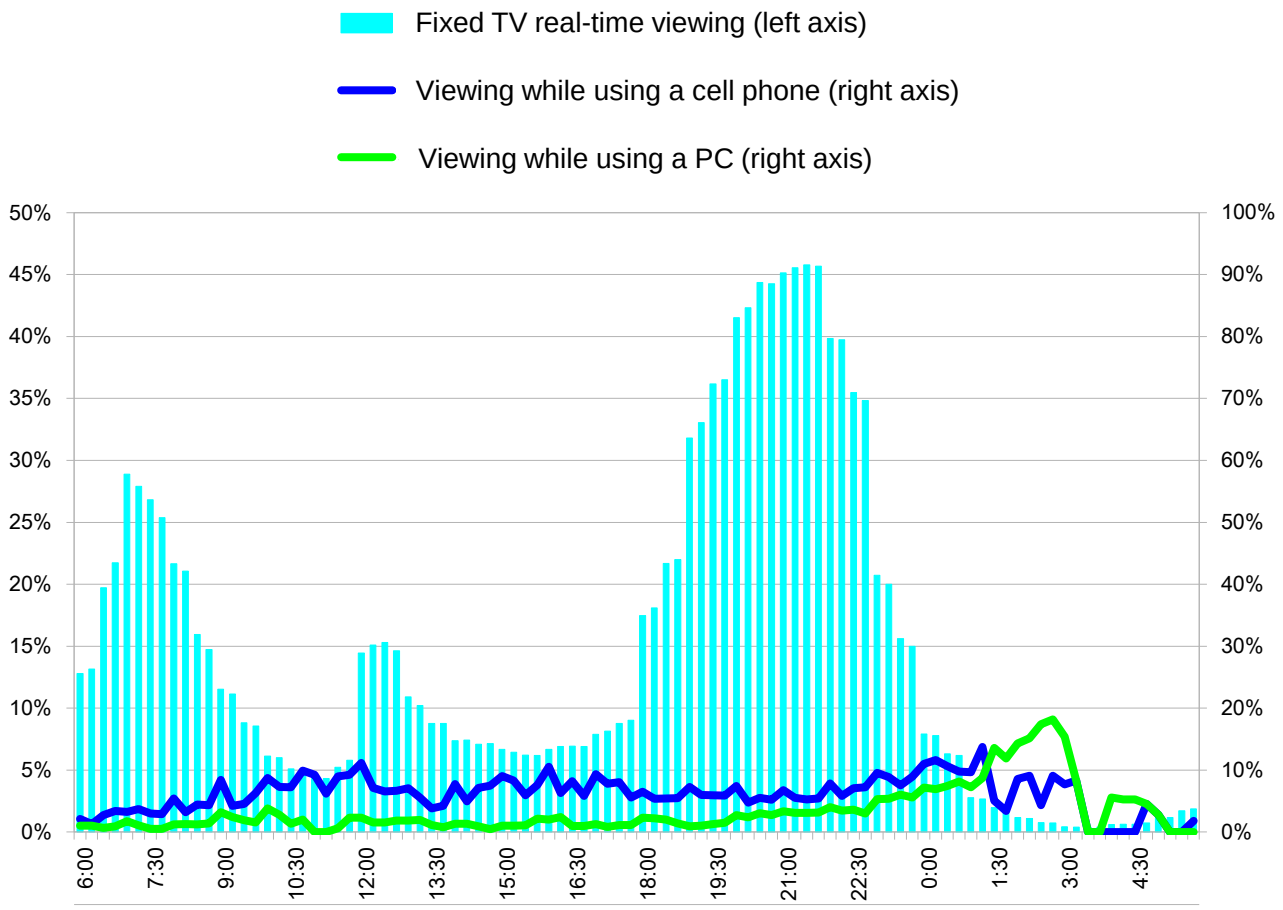
29 Information Behavior Categories

		Average Value [min.]
Television	Watching TV broadcasts	187.8
	Watching prerecorded TV programs	9.8
	Watching DVD software, rental DVDs, etc.	3.3
	Playing TV games	3.1
Cell phones [including PHS]	Reading/writing e-mail	18.2
	Looking at websites	7.2
	Inputting into websites	1.4
	Telephoning	8.4
	Watching TV broadcasts	2.1
	Watching prerecorded TV programs	0.5
	Playing games	1.2
	Watching videos sent over the Internet	0.4
PCs	Reading/writing e-mails	15.6
	Looking at websites	15.4
	Inputting into websites	1.1
	Using chart functions and messenger	1.9
	Working (creating documents with Word, etc., making calculations with Excel, etc.)	42.7
	Watching TV broadcasts	1.9
	Watching prerecorded TV broadcasts	0.6
	Watching videos sent over the Internet	2.7
	Watching DVD software, rental DVDs, etc.	0.2
	Playing games	3.3
Printed Material	Reading newspapers	22.3
	Reading *manga*	1.9
	Reading magazines (excluding *manga*)	3.4
	Reading books, etc. (excluding *manga* & magazines)	8.9
Other Devices	Listening to the radio	30.0
	Playing games on cell phone-type game devices	2.4
	Talking on fixed-line telephone	7.9

Diary-type Questionnaire Form



(Example of Results) Trends for TV Viewing Behavior by Time Period



Daily peak at 9:00 p.m. (21:00)

Other Surveys

○ 2005 Japanese Information Behavior Survey (Hashimoto Research Office)

N=2,029　nationwide survey conducted in March 2005

Target Population = individuals ages 13-69

Concepts, methodology same as for 2009 Survey

○ 2008 BPO Survey of Conditions Surrounding TV Viewing by Youth

Carried out by Hashimoto and others as part of the activities of the Youth Committee of the Broadcasting Ethics & Program Improvement Organization (BPO).

Carried out in November 2008, N=311

Individuals ages 16-24 living in Tokyo

※ The “BPO Survey” mentioned in the latter half of this report refers to this report.

Problem Consciousness

- Are viewers really moving away from TV?
- If the hours or viewing TV are decreasing is the main factor “cannibalism” with the Internet.

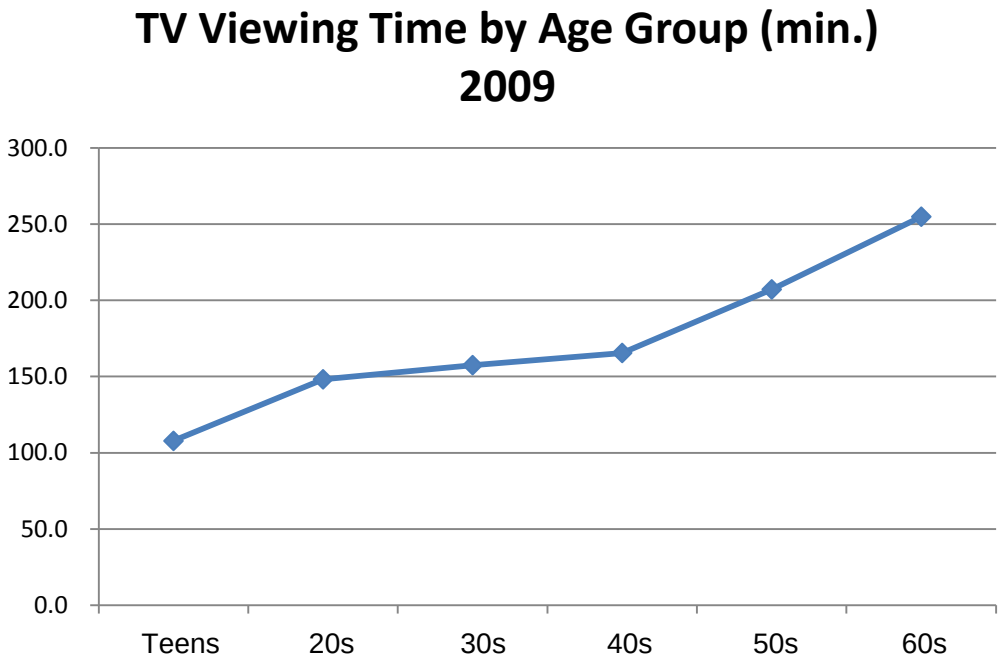
Methods for Verifying whether “Abandonment of TV?” is a real phenomenon (1)

～ Comparisons of TV viewing time by age group

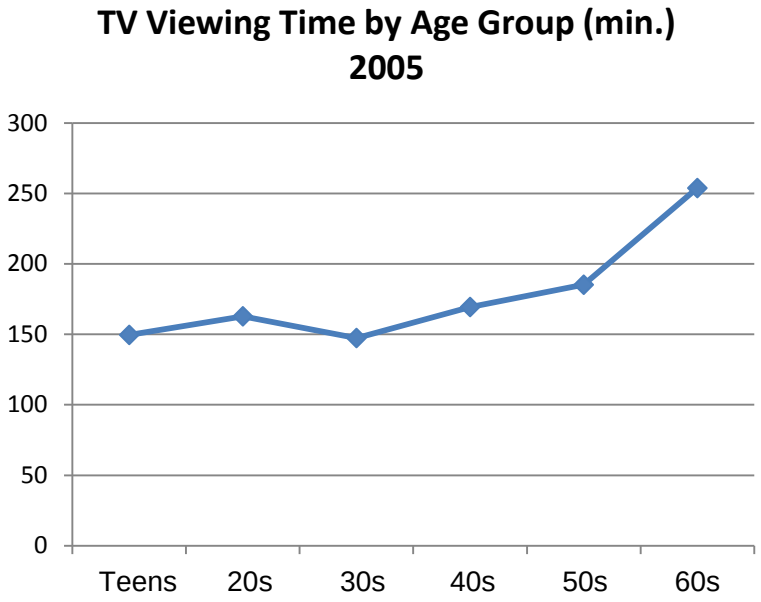
When broken down by age group, the viewing time for the young age group is shorter.

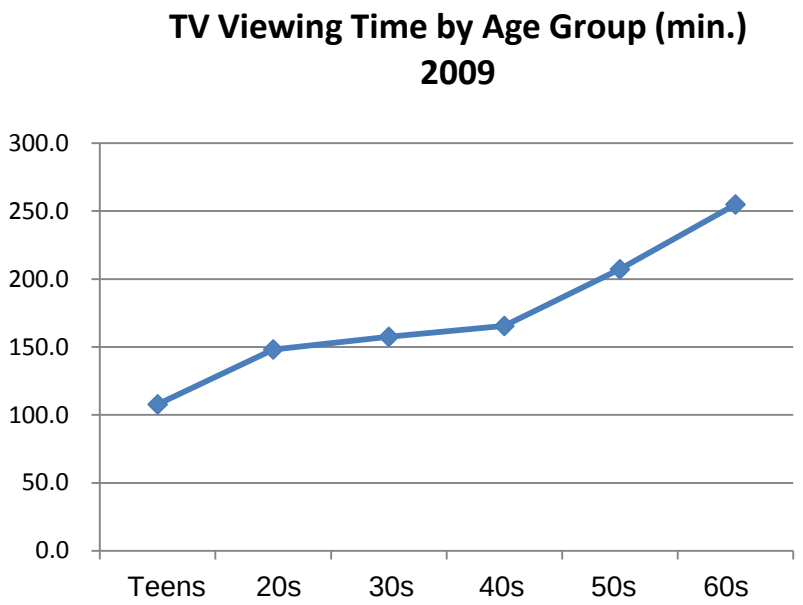
～ So can we conclude, “There is a continuing drift away from TV by the younger generation”?

→No!



In Japan almost uniformly the younger generation watches the least TV →Age group effect





“Age Strata Effect” [Generational Effect]

- Reflects special characteristics of different age groups

For example, even if we say “Young people today . . .” if nothing more is involved than our having changed as we have grown older, and we judge young people of every period to evidence the same tendencies, then this amounts to nothing more than the “age strata effect.”

Cf. “Era Effect” - Changes due to fashions of the day

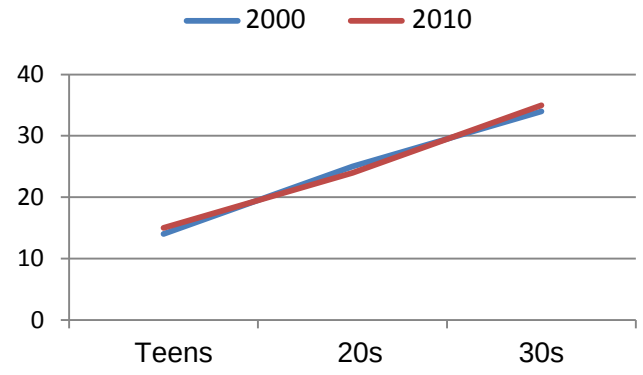
Even if we say “Today’s young people have changed,” if all age groups have been changing in the same direction/inclination, then this merely represents the trends of the times, and does not mean that today’s young people have specially changed.

eg. Even if we say, “Today’s younger people do not eat rice,” since rice consumption has been declining in every age group, this can be considered an “era effect.”

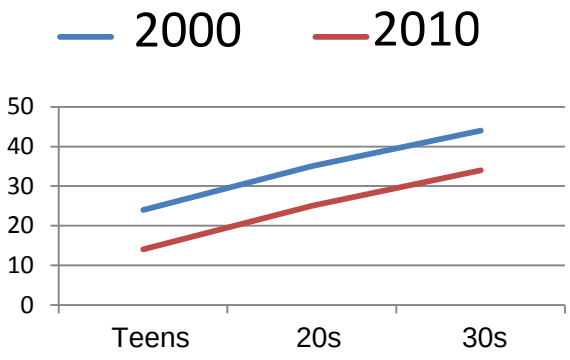
※After every age group had passed through N years, if the TV viewing time declines, then that would mean that TV viewing time is continuing to decline because of the “era effect.”

For example, take the statement: “The behavior and consciousness of young people has changed.” If we have made adjustments for the effects of getting older and era factors in cohort generation analysis for a specific generation, then we need to verify the uniqueness of this cohort.

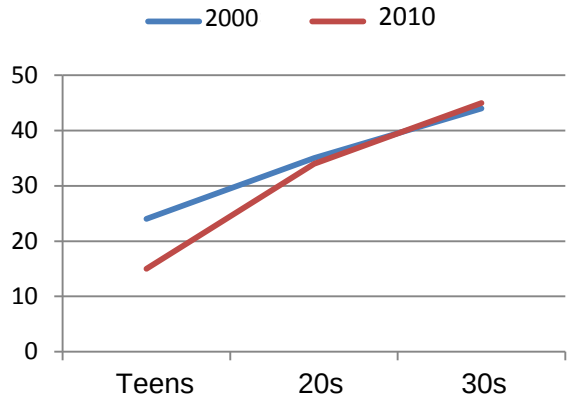
For this reason a minimum of two surveys (T1, T2) need to be carried out during a fixed time period (n years), to see whether groups other than younger generation group x have undergone change due to the age stratum effect (or era effect), in order to clarify whether x alone is experiencing a special effect.



Age Strata Effect

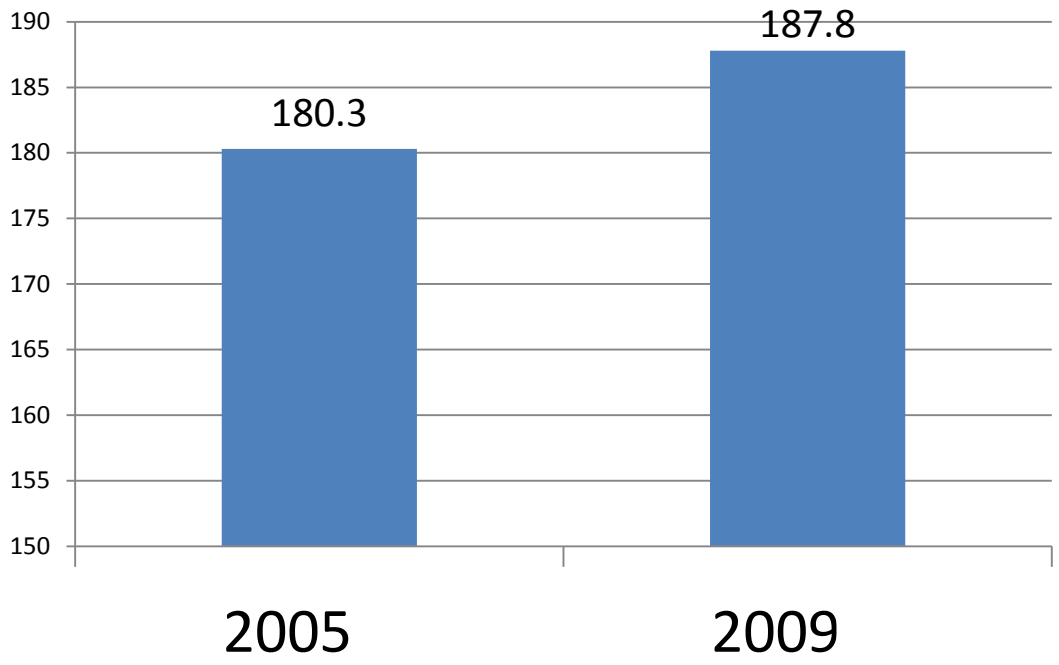


Era Effect



Variation only for new teens

Methods for verifying whether actually “Abandoning TV?” (2)
～ Observing changes in serial TV viewing time



The “Survey of Information Behavior among the Japanese” shows an increase of 7.5 minutes over four years
→Is the actual situation that TV viewing time is on the increase?
→No!

No Reason to Conclude TV Viewing Is Increasing

①Measurement Error　+-5 minutes is within the margin of error

②Fluctuating Factors during the Survey Period

There were possible factors (e.g. big news, events, weather) that led to increases/decreases in television viewing times during the days surveyed in 2005 and 2009 (2 days in each case).

※Actually during those days in both years there were not any major events, news, etc.

③Shifts in Average Age

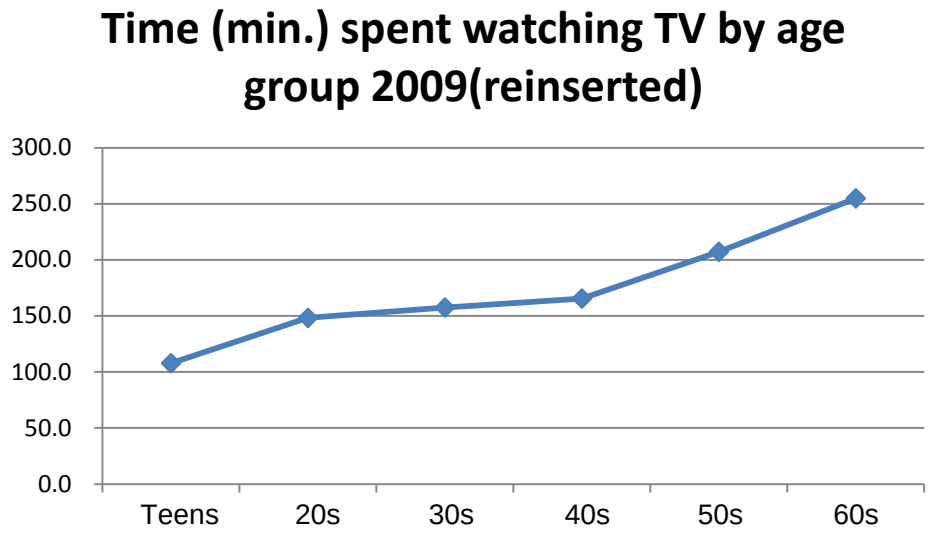
Due to the “stratified random sampling” employed in the survey, concerning the actual population proportions, samples reflecting the actual age distribution could be obtained.

2005→2009, increasing aging of population

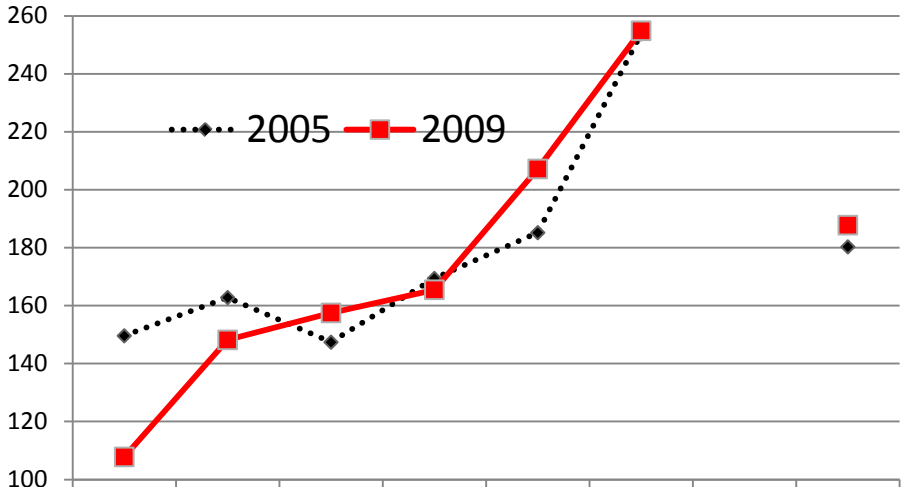
The survey also showed that amidst the framework of “age 13-age 69,” the average age of those being surveyed has increased (from age 42.8 to age 45.2)

On the other hand, it is a fact that the older the person, the more time he or she is likely to spend watching TV.

→The average time television is watched by individuals of the same age in the age 13-age 69 target group tends on the average to get longer (with age)



Well, again let's look at the question "Is the amount of time people are watching TV decreasing?"



	Teens	20s	30s	40s	50s	60s		Totals
2005	149.6	162.8	147.4	169.4	185.2	253.8		180.3
2009	107.8	148.2	157.5	165.5	207.2	254.9		187.8

For individuals in their 30s and above, despite the trend in a four-year period, the amount of viewing is about the same number of hours within the same age group.
For the youth group, there is a particularly pronounced decline for the teens (-41.8 min.)
→ There is a possibility that this decline in the amount of viewing time among younger age groups is not due to the year stratum effect or era effect, but rather to actual conditions.

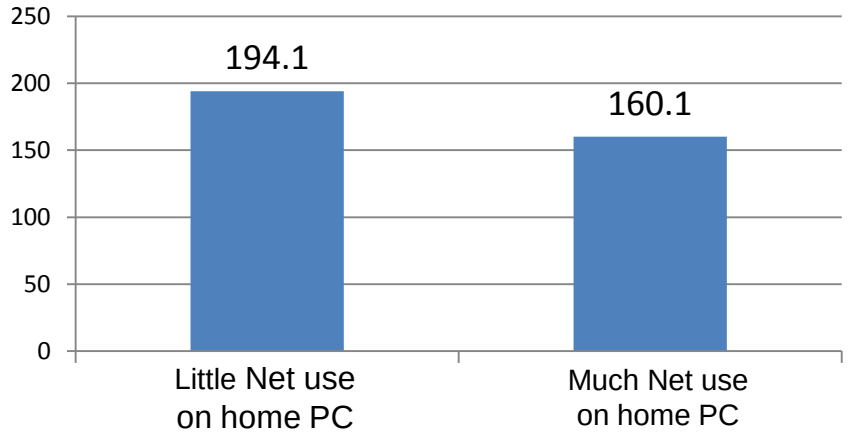
Problem Consciousness 2

Is the Internet encroaching on TV?

○ Correlation can be seen between the number of hours of TV viewing and number of hours of Net use.

Correlation between TV and number of hours of Net use with home PCs

=—0.04 (Although a significant level has not been reached there is a negative correlation)



※ The overall average value for home PC Net use time of less than 16.6 minutes is classified (broken down) above.

～ The more time a person spends using the Net, the shorter time he spends viewing television.

→ Can we then say that the Net is encroaching on TV viewing?

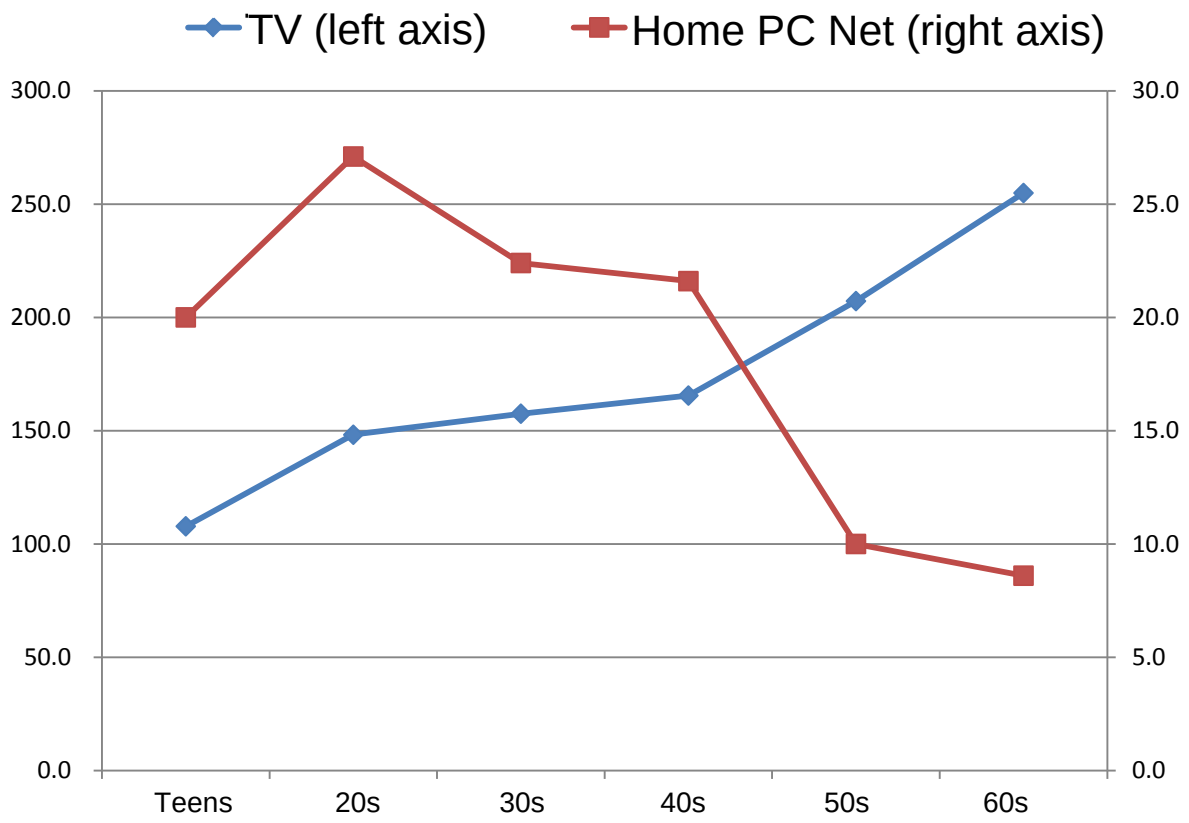
→No!

“The more time a person spends using the Net, the shorter time he spends viewing television.” For example, even if this statement is true. . .

→This does not necessarily mean that Internet use is having a direct impact on television viewing.

That is because the demographic characteristics for Internet users and non-users are quite different (with in general the more closely a person is identified with the class of Internet, the more he or she tends to be young and have advanced education, etc.) and these attributes have an impact on the amount of time spent viewing TV.

PC Net Use Time and TV Viewing Time by Age Group



→ Negative spurious correlation between the “age” factor and media.

Cf. What are spurious correlations?

Take this fictitious situation. Say that we conduct a survey measuring the "degree of baldness" among men, and on the other hand annual income for individuals till they are in their 50s.

Probably we will find a "high correlation between the amount of baldness and annual incomes"

- So can we conclude, "The higher the degree of baldness, the higher the annual income." ? →No!

  - There is a strong correlation between the degree of baldness and age
  - On the other hand, there is also a true correlation between age and annual income for age strata through the 50s.

→ So to use "age" as an intermediate to create a spurious correlation that directly links the amount of baldness with annual income is not based on any real correlative relationship or cause-and-effect relationship.

For example, various kinds of public opinion polls, polls measuring support rates for political parties, etc. often show results reading “the higher the education level, the more A.”

However, in Japan up until now, the closer we get to the present time, there has been a linear rise in the percentage of students going on to higher education.

In other words, the younger the age group, on the average the higher the level of educational attainment.

Consequently, there are many instances in which “academic attainment and A” represents a spurious correlation because of the “age” factor.

Likewise concerning the question of “TV viewing and aggressive behavior by youths and crime rates,” in the United States and elsewhere we can often see survey data which purports to show that “the more TV a youngster watches, the more likely he or she is to be aggressive or have a high rate of crime.” (Therefore TV is evil?)

However, in the United States the tendency is for youngsters from homes with low annual family income and non-White homes, for he or she to spend more time watching television. On the other hand, the trend also is for children from such homes to have a worse family environment and for their rates of aggressiveness and crime to be higher. Consequently, there is a considerable doubt here concerning the intermediary role played by the factor of “home environment” in a spurious (pseudo)- -correlation, and a possibility that watching TV itself is not the reason for such behavior.

Verification of Cannibalism between Internet Use and TV Viewing Time

- The survey is conducted over two weekdays, focusing on individuals who use their home PCs during only one of those days, and identifying for those individuals:

  a. The day on which the PC/Net was used, and

  b. The day on which the PC/Net was not used

  as compared to the amount of TV viewing time.

  → Since here the analytical parameters are exactly the same, we can exclude attribute influences.

Patterns of At-home Two-Day PC Use

Type		N	%
1	Used home PC/Net on both weekdays	246	16.5
2	Used home PC/Net only on the first weekday	97	6.5
3	Used home PC/Net only on the second weekday	87	5.8
4	Did not use home PC/Net either weekday	1060	71.1
		1490	100.0

For the 184 individuals who fall into classifications (2) or (3),
we compared TV viewing time for the day of use versus the day of non-use

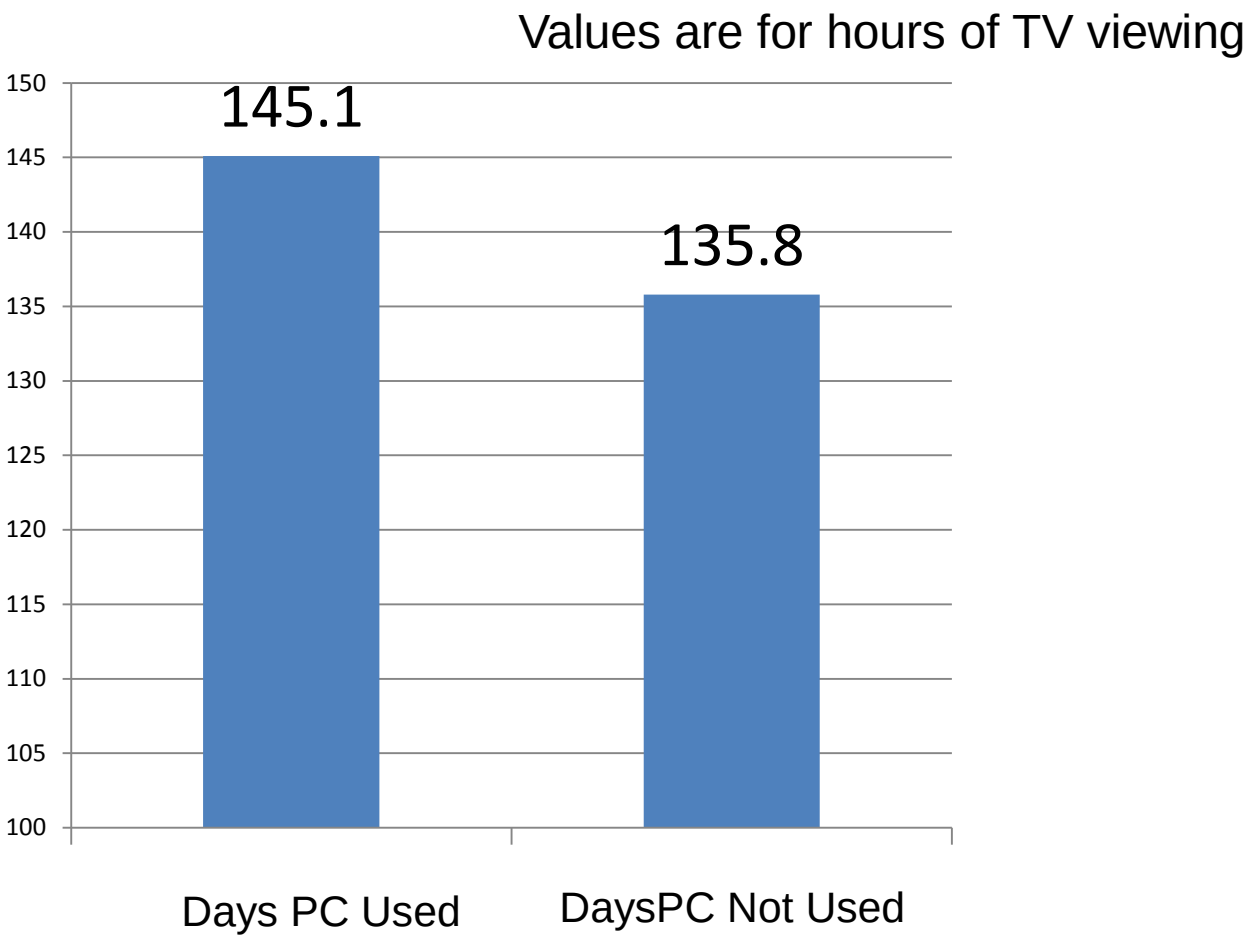
	TV Viewing Time	N
Day PC Used	145.1	184
Day PC Not Used	135.8	184

If PC/Net use were eating into TV viewing time . . .

On days when the PCs were used, the TV viewing time should be shorter, while on days when PCs were not used, TV viewing times should be shorter, but . . .

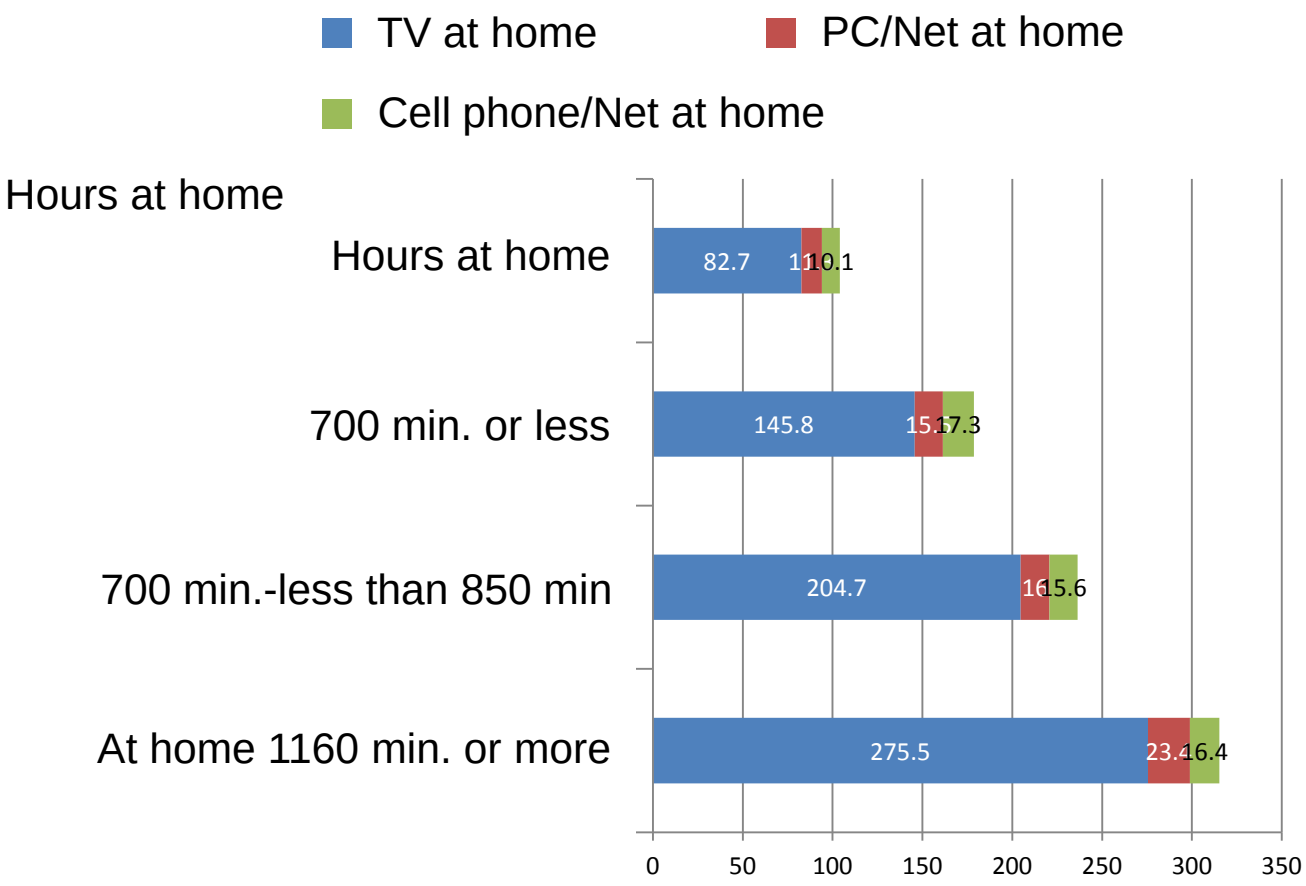
[Actual Results]

On days when the PC/Net was used at home, TV viewing time was actually longer.

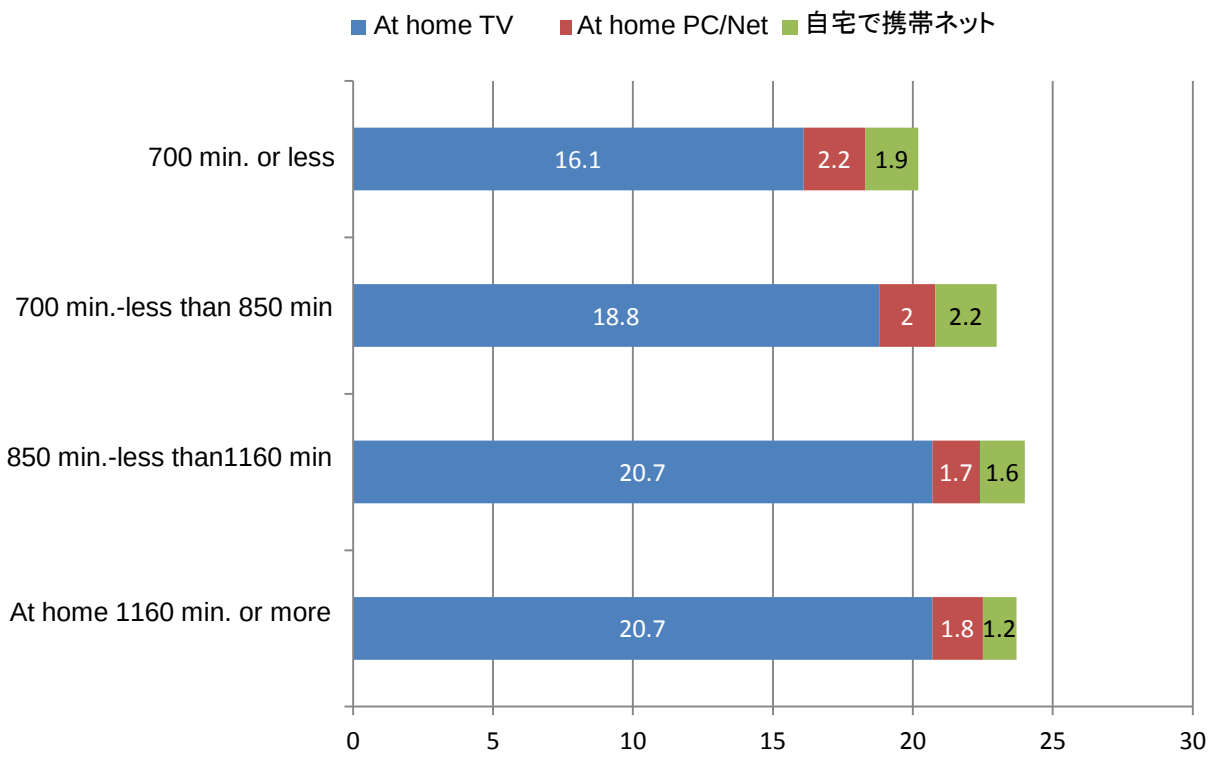


- People tend to allot their time at home to uses of various customary media.
- If we look at the use of media in terms of time for TV viewing or newspaper reading, PC use, etc. at present we do not see the limited personal free time at home being one-sidedly skewed in any particular direction, but rather the amounts of time allotted for each within the at-home free time being variously lengthened or shortened.
- We cannot conclude that there is no “cannibalism” relationship.

If the time at home is long, then periods devoted to both “TV” and “Home PC” lengthen.

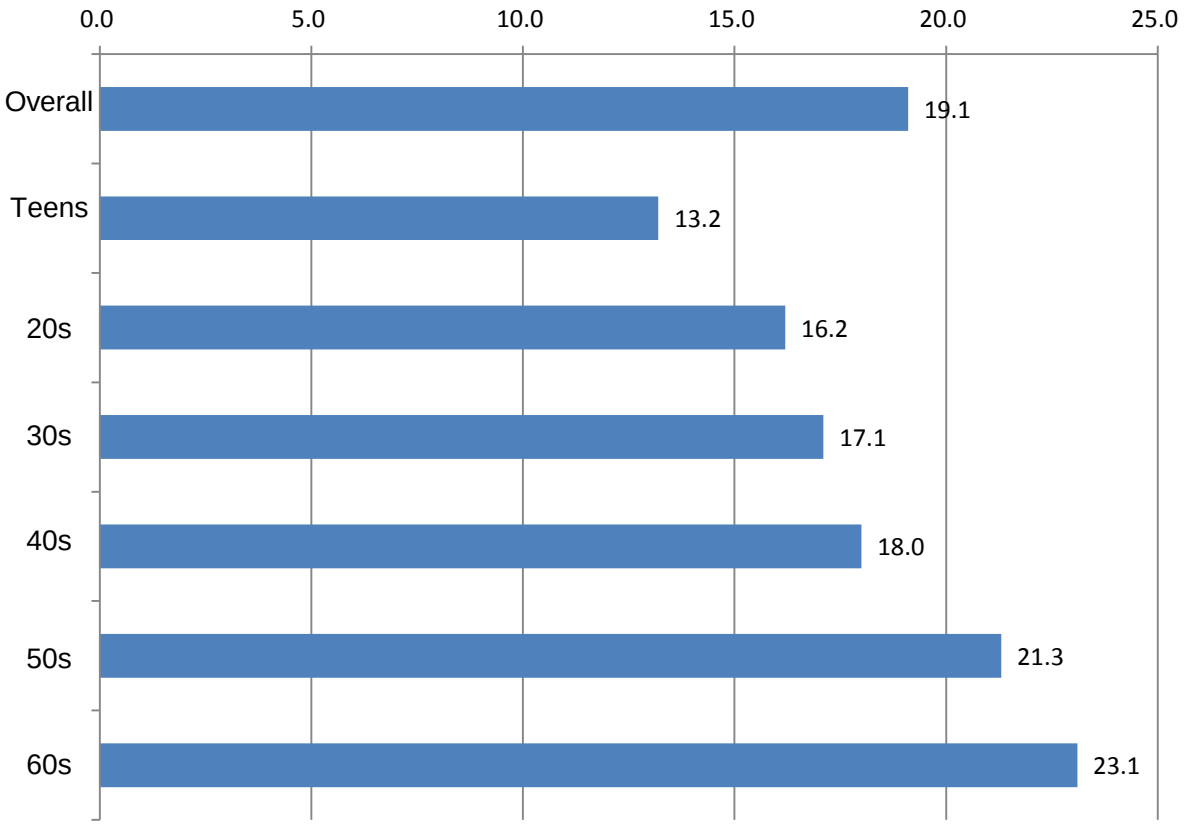


The ratio of TV viewing time to total at home time is roughly fixed (For individuals at home 700 minutes or more, it is approximately 20%)



Incidentally, according to reanalysis Hashimoto conducted based on data from the "NHK National Lifestyle Time Survey," TV viewing consistently accounts for roughly 40% of "time at home and awake."

Actually, if we look at the details, we find that the ratio of at-home time differs according to age group, with the proportion decreasing the younger the age group.
←Young people have lots of other things to do.



Correlation analysis shows that there is no cannibalism for individuals ages 15-29 regarding TV and “PC/Net” use. (no correlation)

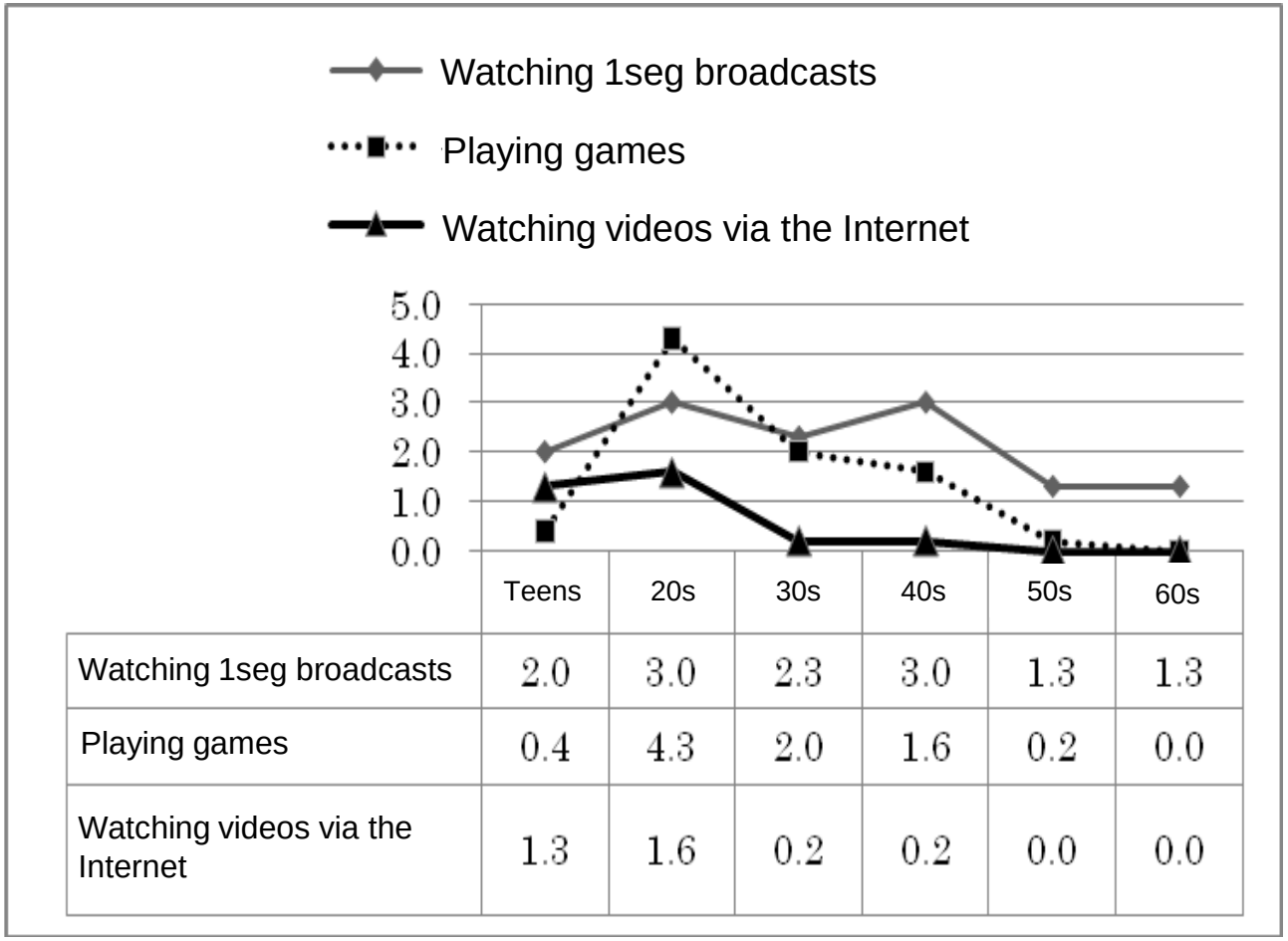
There is almost no correlation between “TV” and “PC/Net videos.” There is however a valid correlation between “inputting onto a website” and TV viewing time.

Correlations with TV viewing time					
		correlation coefficient	significance level	significance level	N
PC	Net videos	−0.05887	0.1827	n.s.	514
	Reading/writing e-mails	−0.04652	0.2925	n.s.	514
	Looking at websites	−0.08369	0.058	n.s.	514
	inputting onto website	0.08873	0.0444	*	514
	Chat/Messenger	−0.09439	0.0324	*	514
	(Limited only to users of Net videos)				
	Net videos	−0.00311	0.984	n.s.	44

The significance levels show the “critical ratio” – with the lower the value the less likely it is that even if there is a declaration of “significant relation” this will be an overstatement. For example, if the value is 0.9, that indicates that we almost certainly cannot say that a significant relationship exists. Actually, the correlation coefficient is close to zero (0).

In addition, there is no evidence that viewing videos on a cell phone eats into TV time

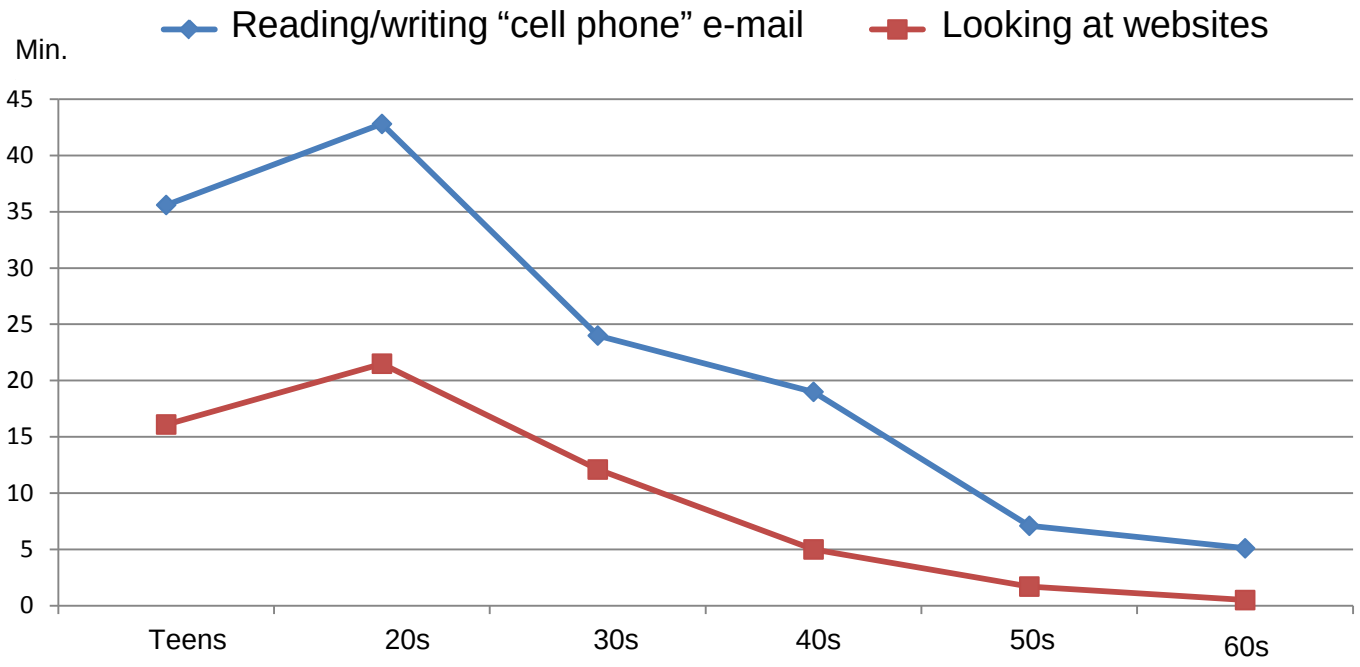
～The use of services that might seem to encroach on TV time is extremely short in duration



	Teens	20s	30s	40s	50s	60s
Watching 1seg broadcasts	2.0	3.0	2.3	3.0	1.3	1.3
Playing games	0.4	4.3	2.0	1.6	0.2	0.0
Watching videos via the Internet	1.3	1.6	0.2	0.2	0.0	0.0

Comparisons of contact time for image information on cell phone screens by age group (Unit: minutes)

The younger generation spends quite a bit of time looking at cell phone e-mail and websites (see graph below), so that the time devoted to these pursuits in relation to the viewing of television by individuals in their teens and 20s is significant.
～But the more time a youngster passes with a cell phone, the more TV he or she is likely to watch.



Correlations with TV Viewing Time (age15 – age 29)

E-mail reading/writing	0.097*
Looking at websites	0.099*

The amount of time that young people spend watching TV continues to decline, but if the PC/Net and cell phones are not major causes of the decline, what is?

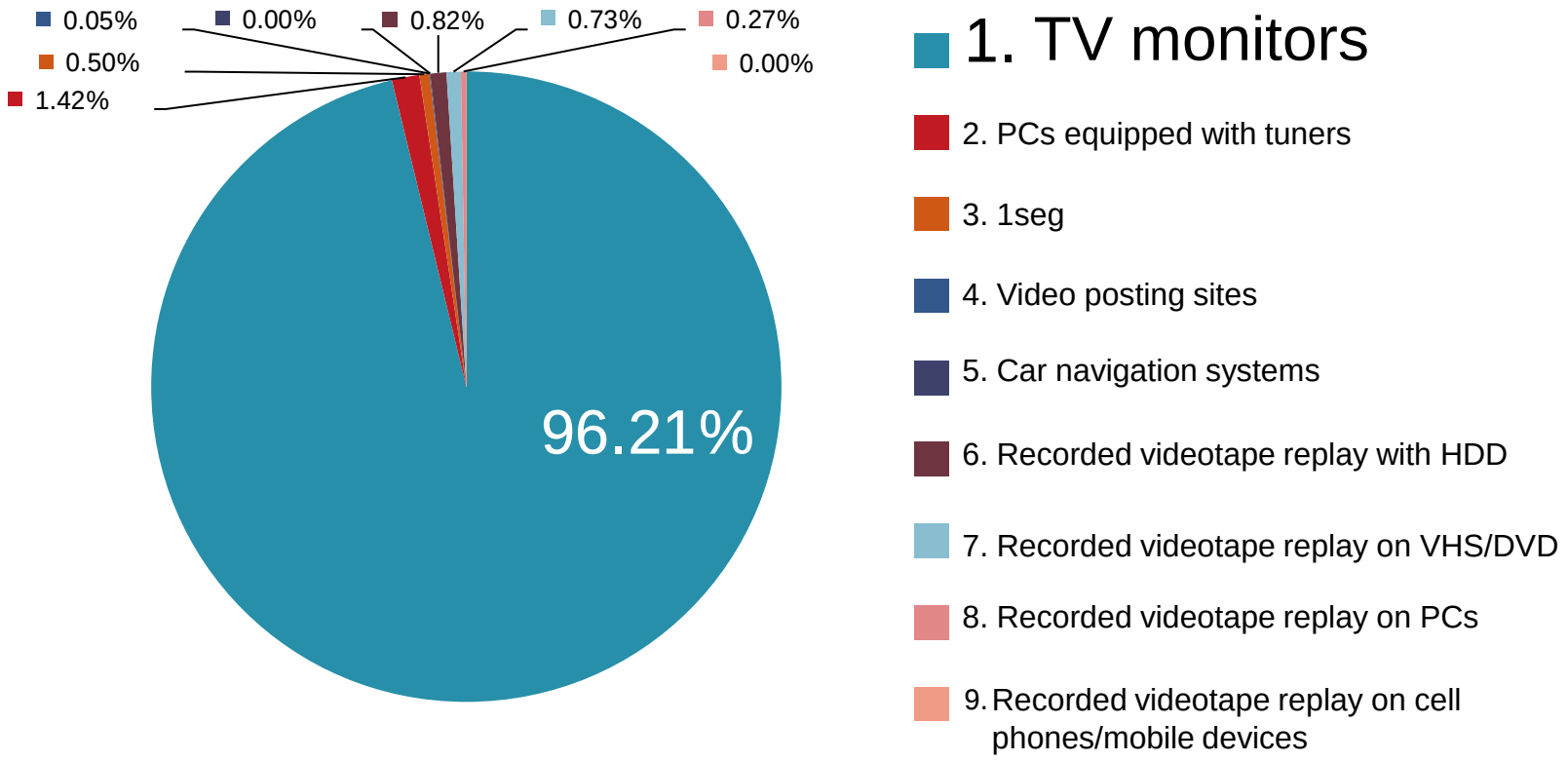
（1）Diversity of A/V equipment

～ Decrease in live viewing of TV monitors?

（2）Time shift (recording) for later viewing?

（3）Increasingly tired of TV?

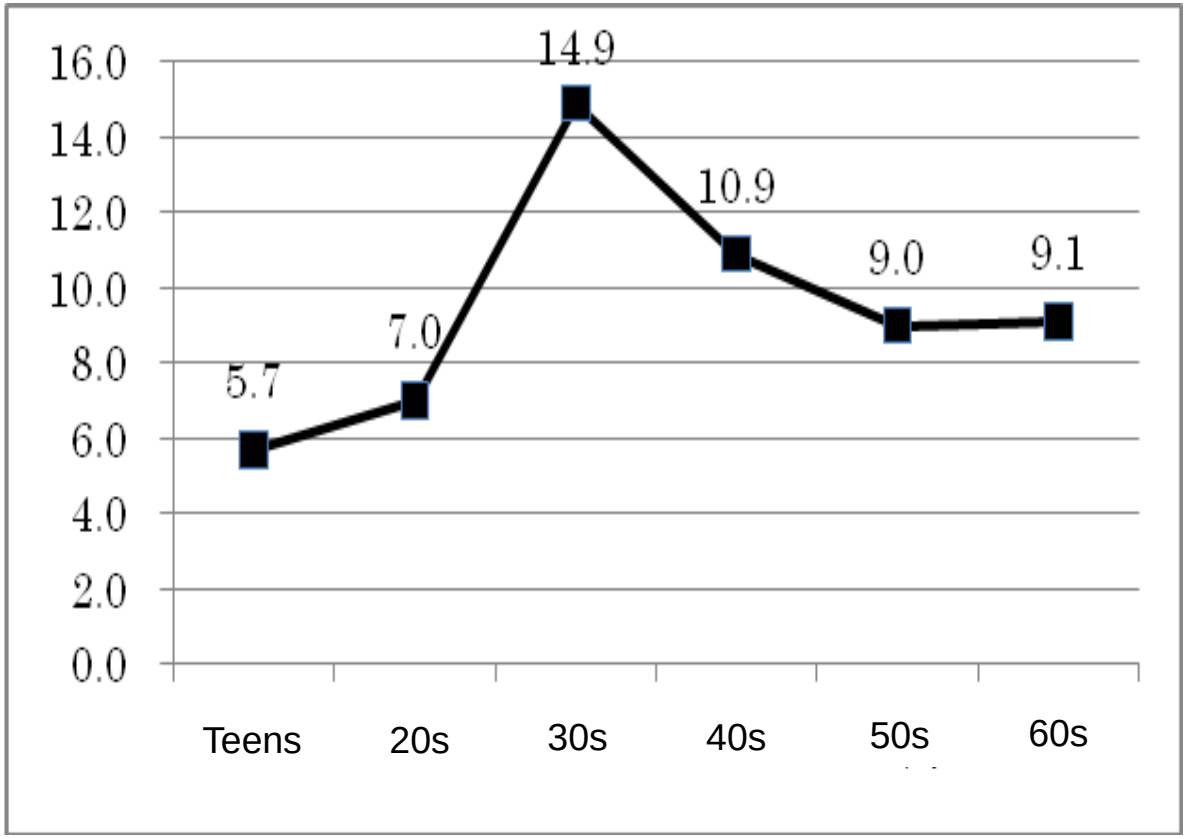
（1）Diversification of A/V equipment? (BPO Survey)



TV monitors still account for 96% of use. Delivery by 1seg servers, PCs, etc. is miniscule.

（2）Nor is there a great deal of time-shift viewing

←Rather the period of recorded videotape viewing by the younger generation is short



Viewing time for recorded TV programs viewed by age group (Unit: min.)

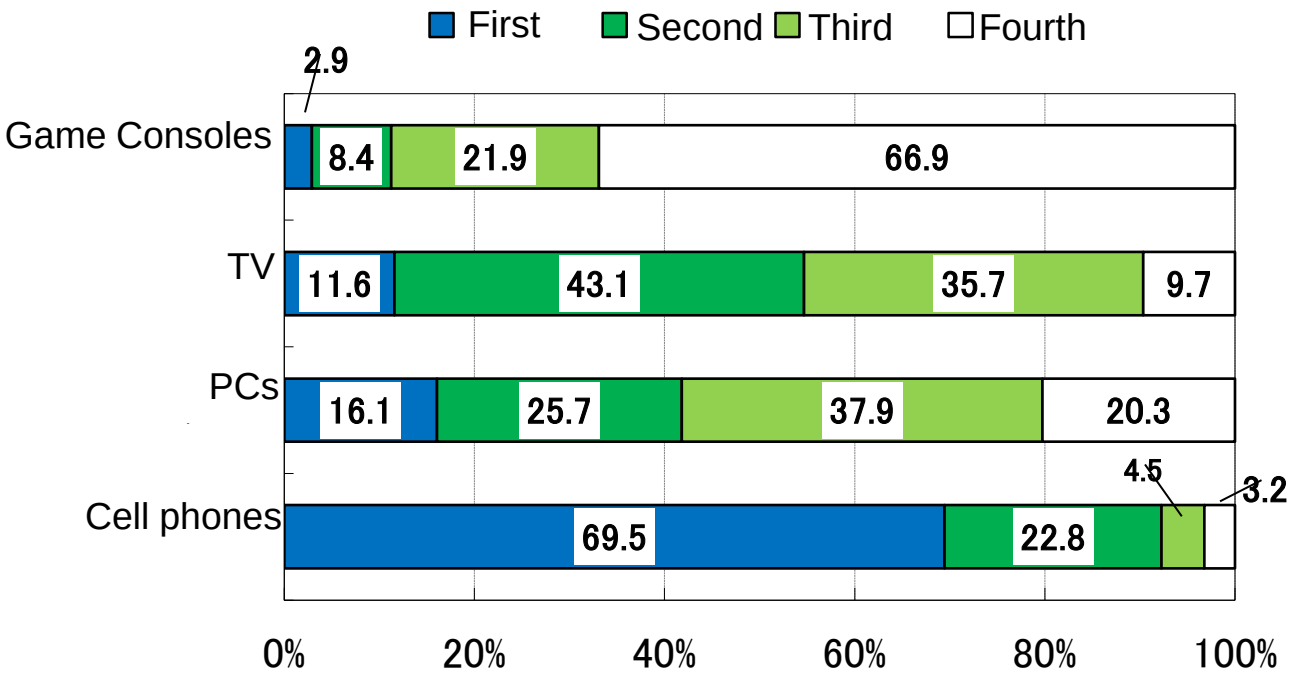
（3）Are younger people increasingly bored by television?

→ We might say so.

Relative importance among information media declining

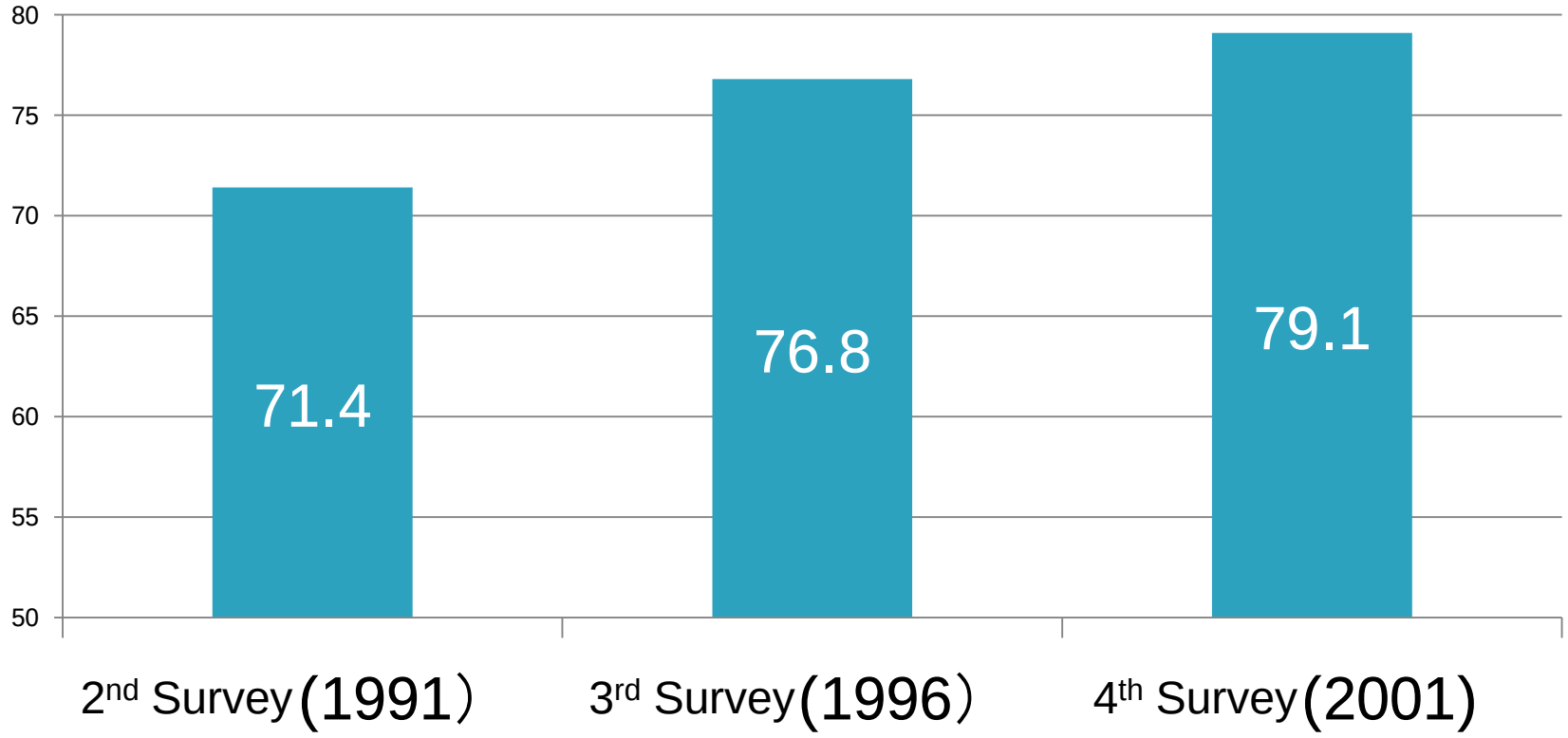
(BPO Survey)

“What media are important to you?”



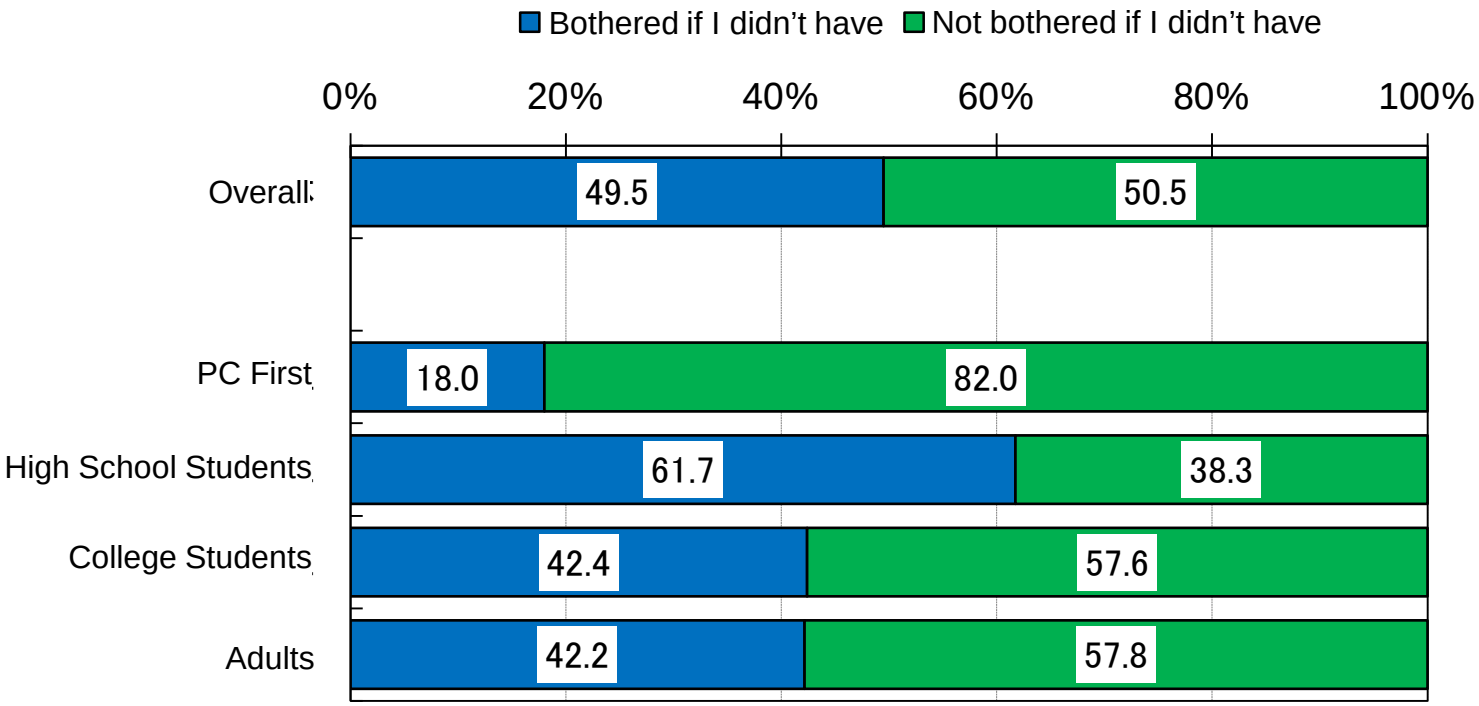
In the past TV was overwhelmingly considered an "Essential Media."

In reply to the question "What media are important to you? (choose three)" in the survey "The Information Society and Young People" (Management and Coordination Agency[now defunct] -- Prime Minister's Office) the ratios for TV were as shown below:



In the Cf.2006 survey, this question was eliminated.

Already a majority answer, “It wouldn’t bother me even if I didn’t have it.”(BPO Survey)

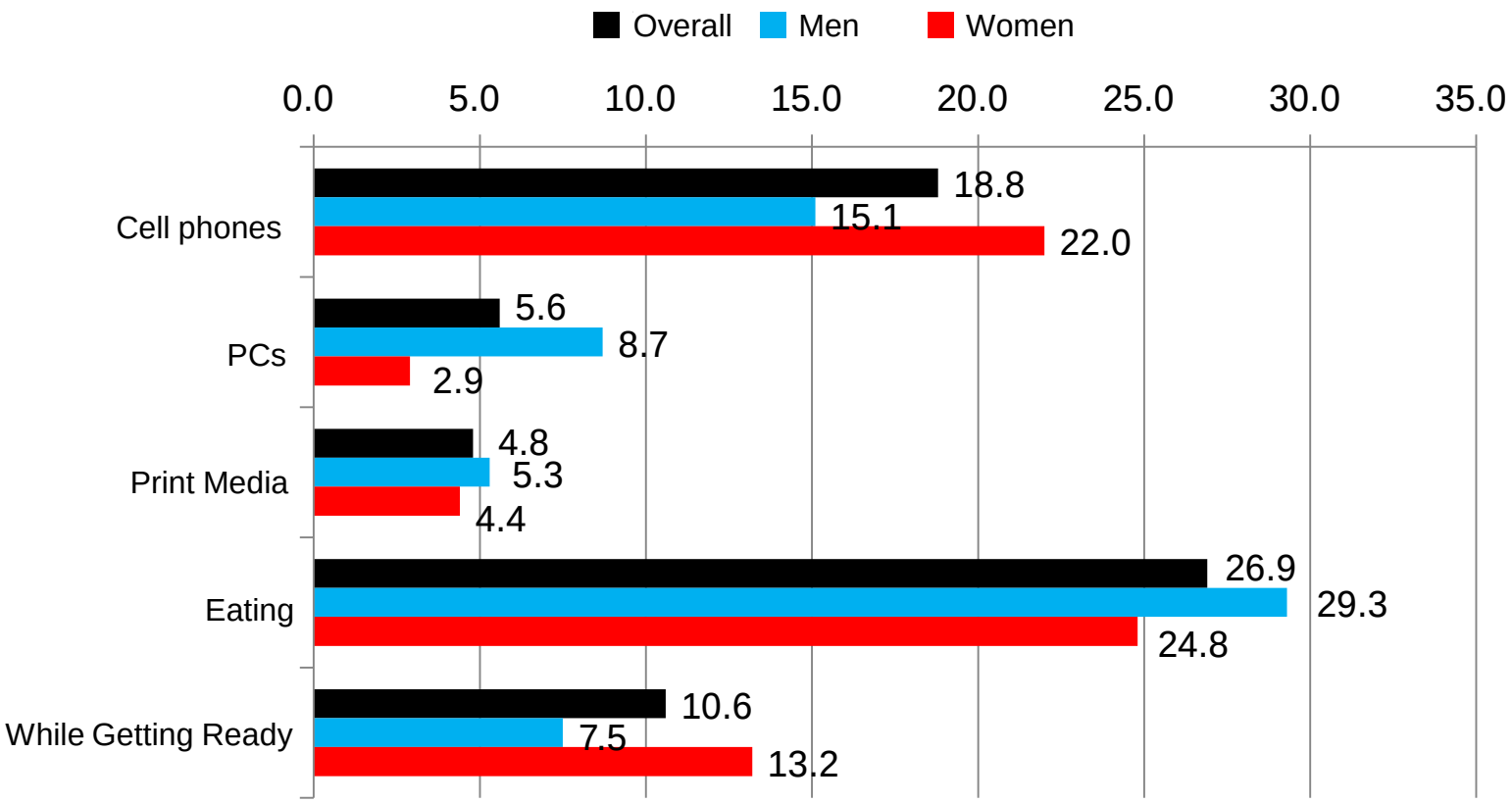


- More people are saying that it wouldn't matter to them if there were no TV.

  On the other hand, simultaneous use with other media, especially cell phones, is increasing.

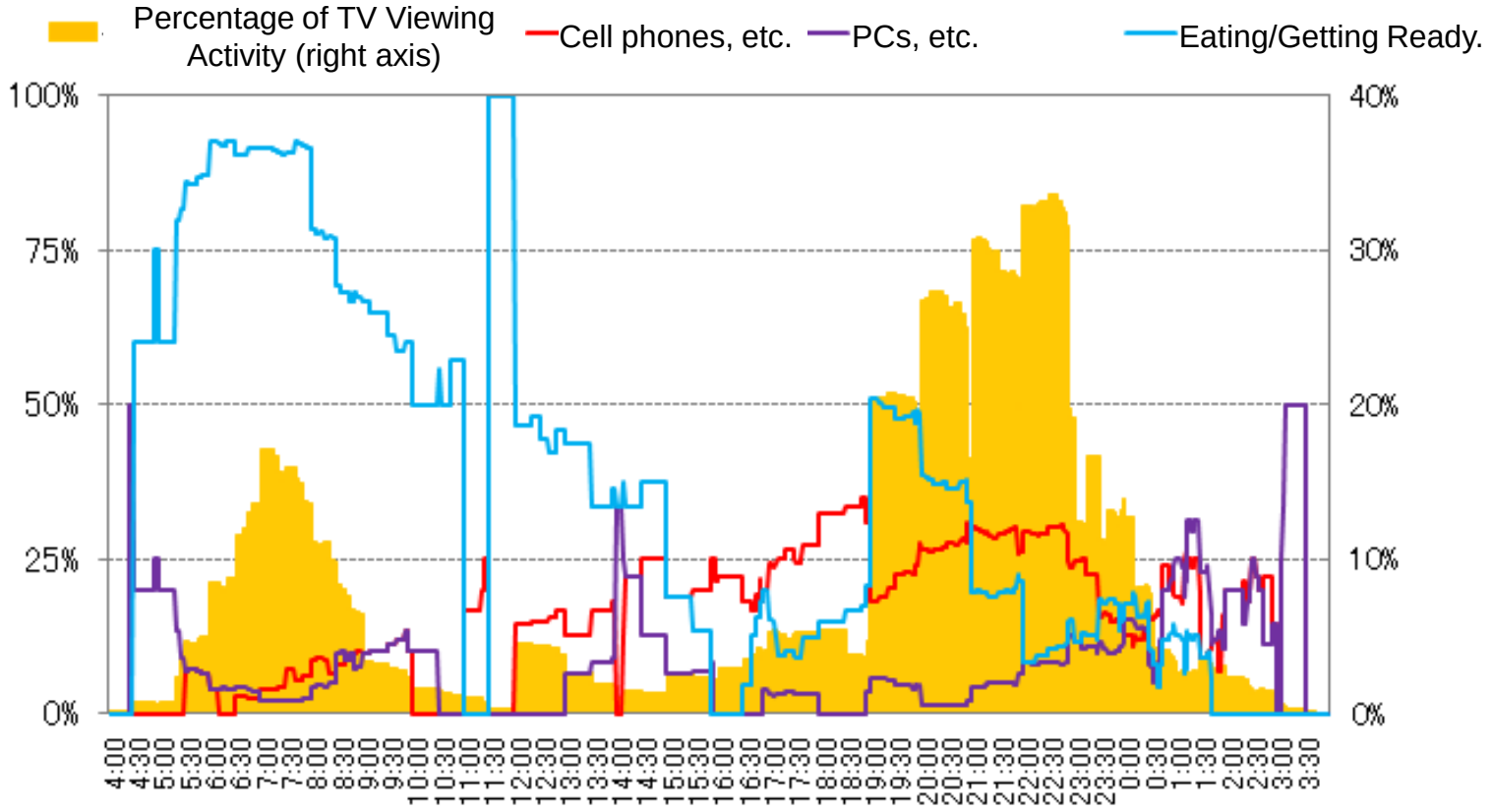
While Doing Something Else…

(Survey of BPO Program Schedule)



Numerical values are for the proportion of programs which were viewed while being involved with some other usage activity.

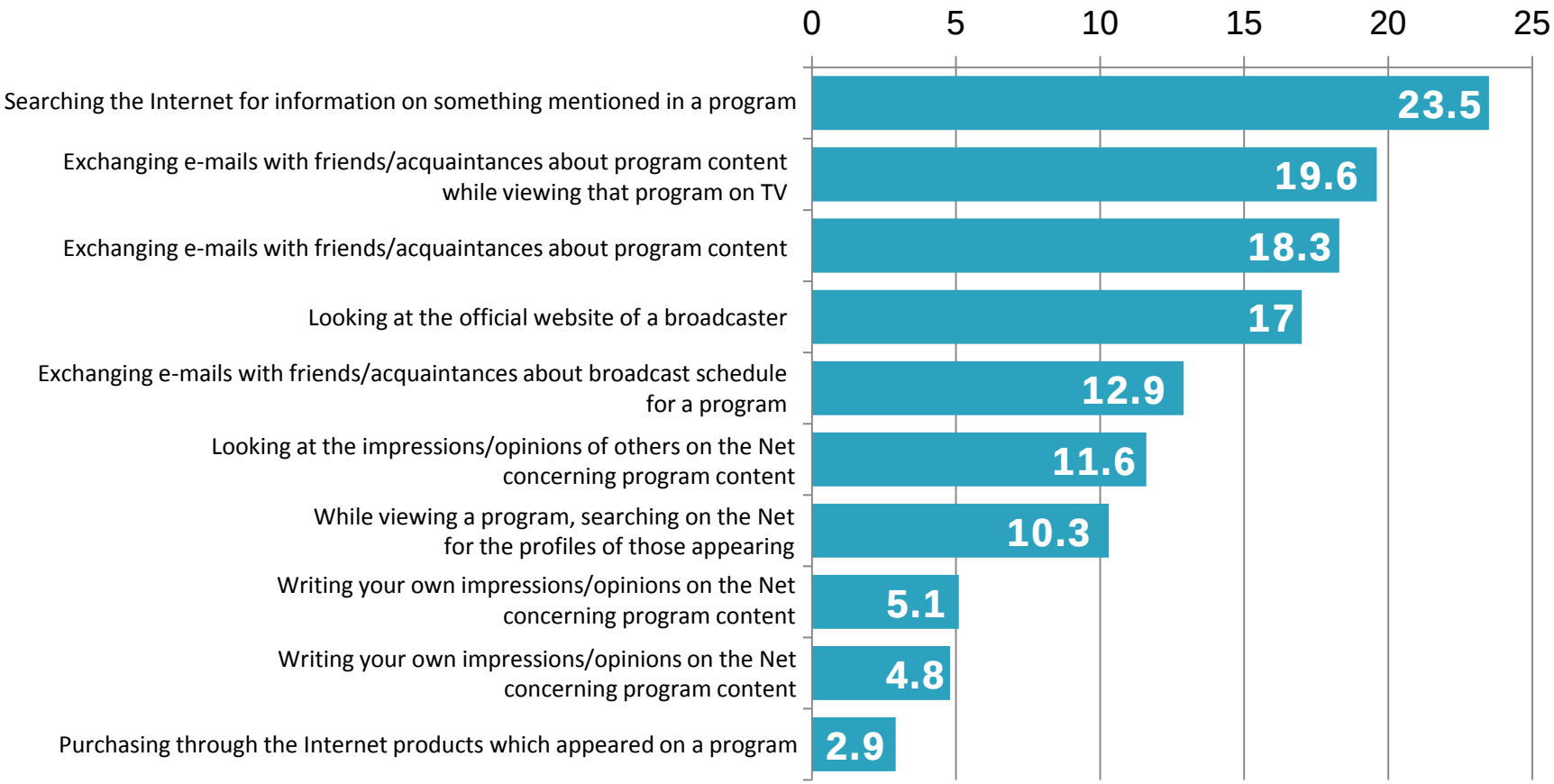
TV Viewing and Other Activities by Time (BPO Survey)



On weekdays during the 6:00 p.m. time slot,
35% of TV viewers are fiddling with cell phones (red line).

Activities Using the Net while Viewing TV Are Also Becoming More Common

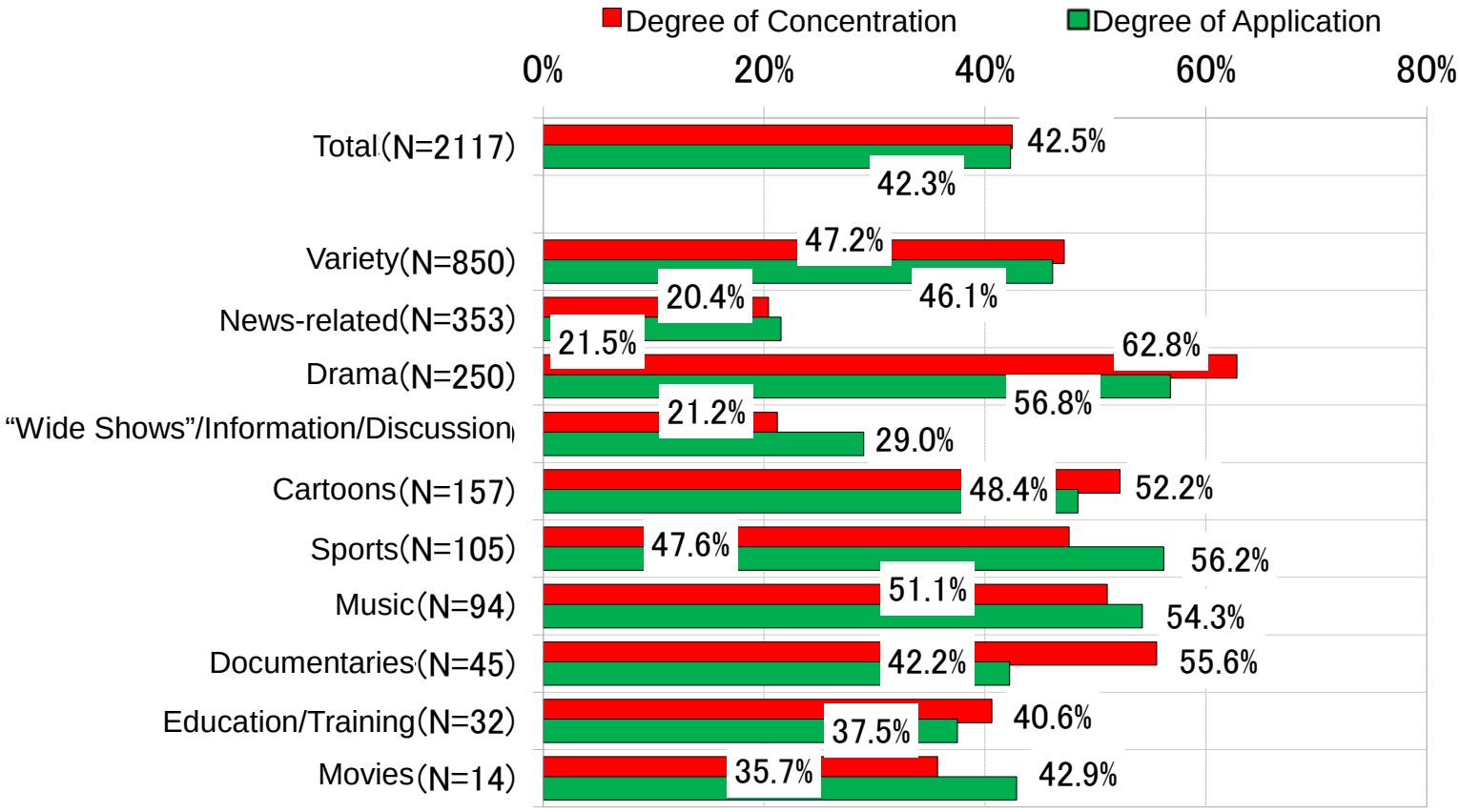
(BPO Survey)



Degree of Concentration and Degree of Application

Degree of Concentration-Did you concentrate, or did your mind wander?
Degree of Application -Did you apply your attention to the program,
or did you do something else simultaneously?

About 60% of TV programs are watched while doing something else



(According to NHK surveys) previously too television has been a form of media to which people pay only about half-attention while doing something else.

However, in the past this “something else” has

usually consisted of eating or getting ready.

Nowadays, the cell phone holds first place for

the other “something elses,” and it by its very

nature requires concentration (to write e-mails,

etc.)

→ Actually, the degree of watching TV while “doing something else, letting the mind wander” is growing. -- So that TV is increasingly becoming a medium to which total concentration is not given. People are not all that particular about what they are watching.

However, there are still important aspects.

(1)TV remains an important media which allows viewers to kill time.

(2) It is important as the number one source of news

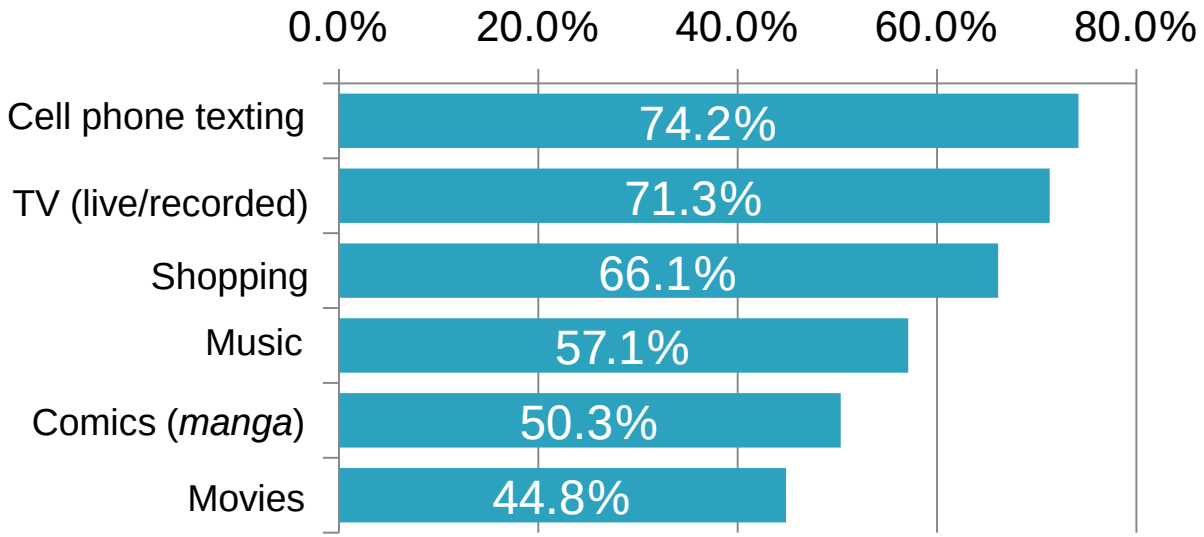
(3) Felt to be highly effective

(4) High reliability

（1）Holds important position as leisure activity

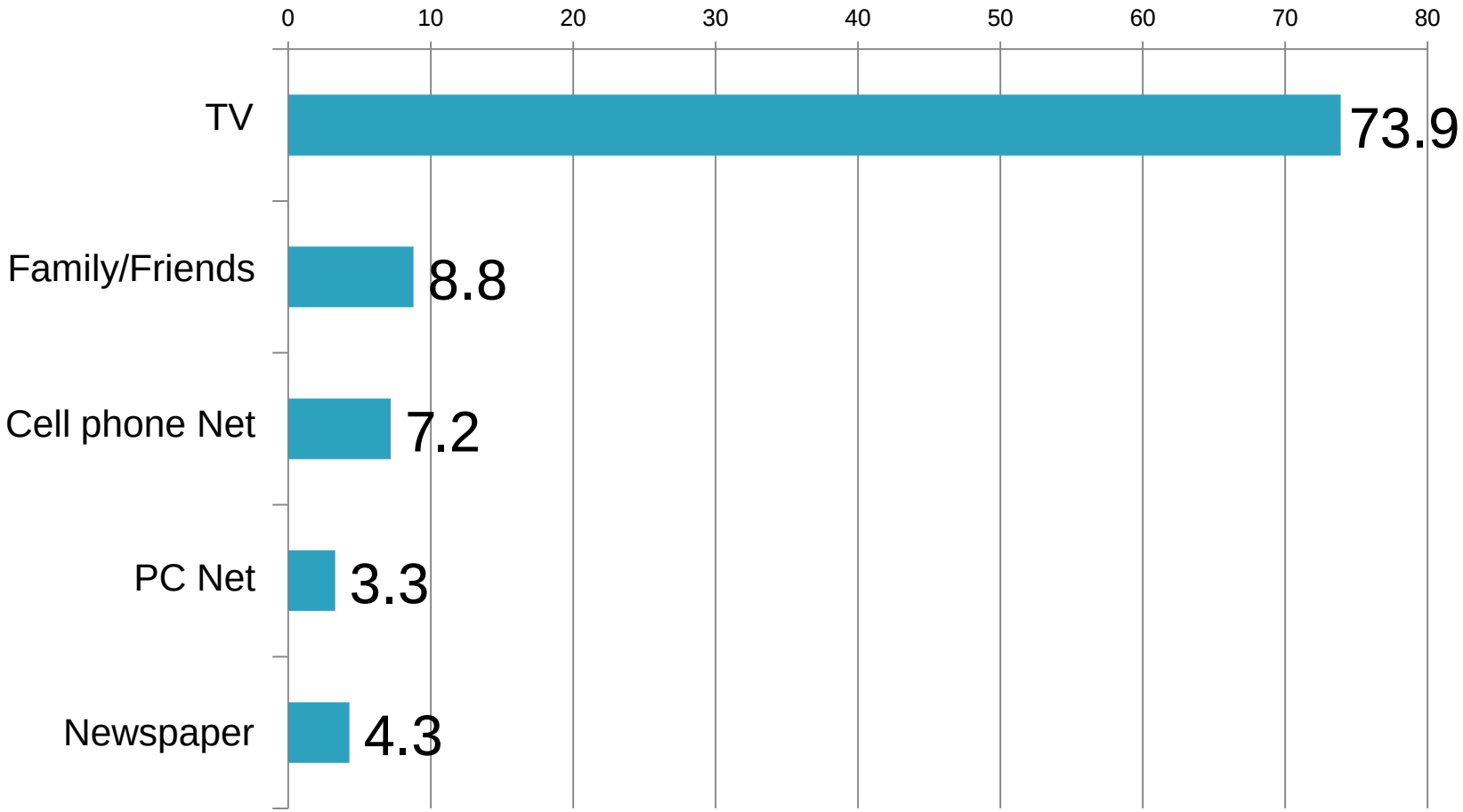
“What important means do you have for passing free time?” (multiple answers, 40 choices)(BPO Survey)

Although cell phones are now superior, TV is still an important source of free time amusement.



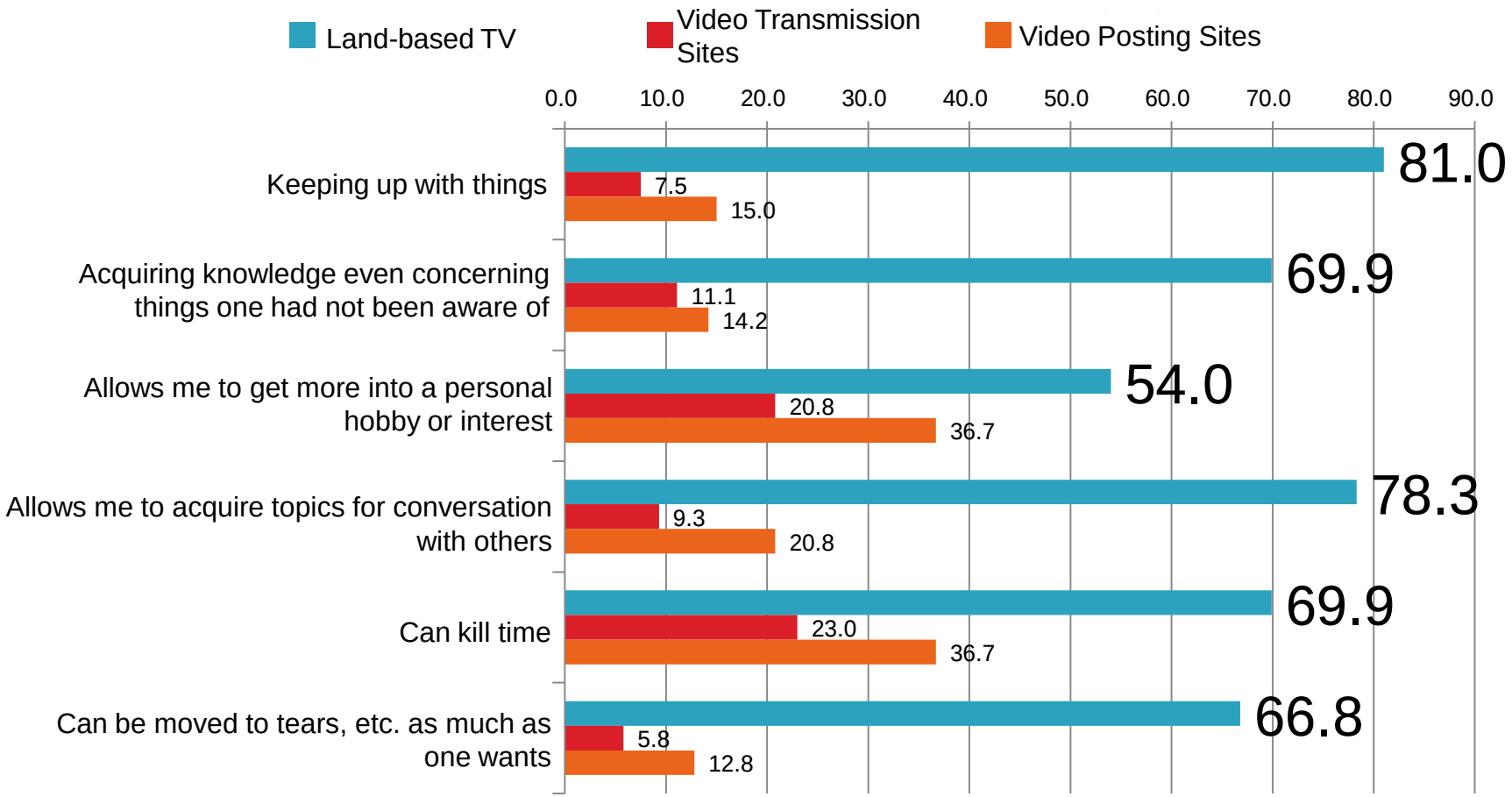
(2) Importance as No. 1 Source of Information

("What was the media source through which you first learned that Barack Obama had been elected president? -BPO Survey)



(3) Feeling of Effectiveness

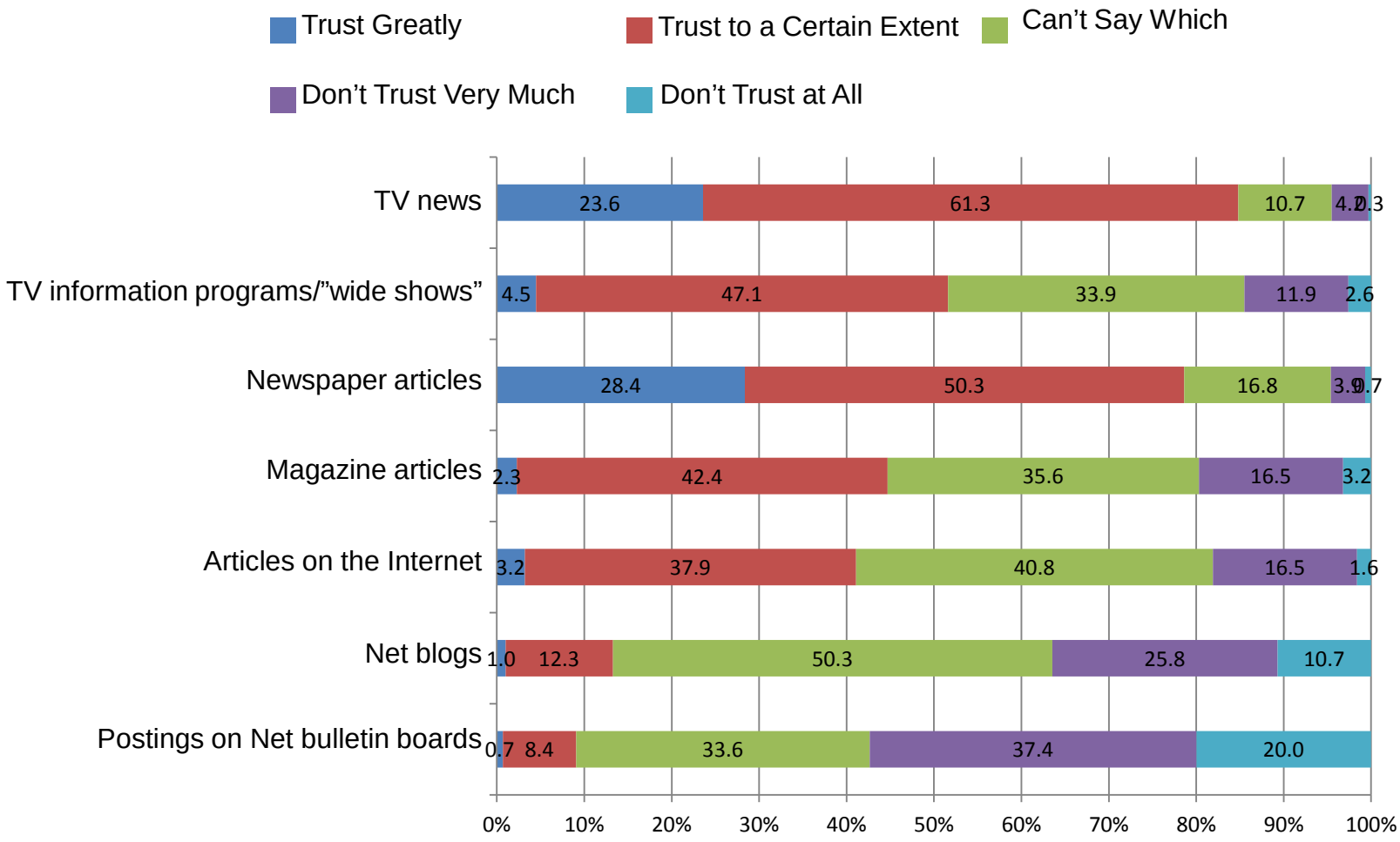
("Which media do you think are most effective in terms of the following needs?" -BPO Survey)



Percentage of answers declaring "Useful"

(4) Reliability-A Great Deal of Trust in TV

(“How much trust do you have in the following media?” -BPO Survey)



Summary

(1) The drift away from TV among the younger age groups continues.

(2) Nevertheless, use of the Internet has not directly encroached on the TV viewing time. Nor has the use of cell phones encroached on it.

(3) Regarding at-home time, there is a suitable allocation of time among various media.

(4) Nor is time-shift viewing (recorded for later viewing) increasing.

（5） However, recognition of TV’s degree of importance among media is decreasing.

（6） We are also seeing an increase in TV viewing while involved in other media.

→ A taste for or interest in TV programs is decreasing, and “have to see” demands are fading. (We’re forced to admit that this kind of feeling is reducing viewing time.)

However, television still is important as:

(1) A method for killing free time,

(2) As the No.1 source for information,

and in the public mind it also enjoys high marks for

(3) Sense of effectiveness,

(4) Reliability

Besides,

- TV is an important supply source for other amusement/entertainment software. (More than 40% of the content at accessed Net video provision sites was related to TV programming).
- Original PC/cell phone Net content remains immature (particularly in that they have almost no news coverage capability).

→ Does the importance of TV as an information provider and contents creator still continue?