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Privacy shakes Japan's statistics on health and welfare

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Abstract

In 2005 Japan completed its first census after the Personal Information Protection Law went into force in April 2005. The debate about the new law raised privacy concerns for the first time among the public. The news-media also provided several examples of possible lack of safeguards in the data collection of sensitive personal information required for the census. The result was the highest non-response rate ever for the Japanese census. Consequently, its accuracy and role as a source for the reliable national statistics for health/welfare policy-making is now critically threatened. In this paper we argue the necessity to adopt specific safeguards to protect personal data in any future census if the trend of increasing non-response rates is to be reversed. We provide some suggestions for such safeguards, and criticize the Japanese government's response of focusing exclusively on the mechanism of data collection as a means of meeting the privacy challenge.

Introduction

On October 10, 2005, Japan completed the first national Population Census across the country after the Act concerning Protection of Personal Information (APPI) was issued on May 30, 2003, with total enforcement on April 1, 2005. The census in Japan has been implemented every five years since 1920, and it has greatly contributed to Japan's health and welfare policy-making. Japan spent 65 billion Yen (310 million GBP) on the census 2005.¹ The 2005 census, however, encountered significant data collection problems, partly due to the effect of the new law, threatening its scientific validity and social value for health and welfare policy-making as a source of reliable national statistics. In this paper we will describe the contents of the new law, argue that the discussion about privacy in conjunction with the adoption of the law affected the 2005 census, and conclude that the privacy protection aspects of the census need to be strengthened in order to improve the quality of the census.

The provisions of the APPI

The APPI is composed of a set of three laws: (1) the 2003 Law No. 57 applies to all enterprises collecting, storing, or handling data of more than 5,000 persons, except national and local administrative bodies and independent administrative corporations (IAC) including national universities, national hospitals, and attached-to-national-university hospitals; (2) the 2003 Law No. 58 applies to administrative bodies; and (3) the 2003 Law No. 59 applies to the IAC.^{2,3,4} Enterprises collecting/storing/handling data of fewer than 5,000 persons or individuals using personal data not for business purposes are exempt from the APPI.

The main purpose of the APPI is to state the basic concepts and basic policies regarding the proper handling and protection of personal information, the protection of the rights and interests of individuals, the governmental duties in relation therewith, and at the same time the appropriate utilization of personal information.² Its essential framework is based on the recommendation and the eight principles governing the Protection of Privacy and Transborder Flows of Personal Data in 1980 by the Council of Organisation for Economic Co-operation and Development (Table 1), which aimed to harmonize privacy protection and prevention of economic interruptions in international flows of data.⁵ Therefore, the enterprises concerned are basically obliged: (1) to specify the purposes of personal data utilization, (2) not to use that data beyond these specified purposes without obtaining the consent of the data subject, (3) not to transfer that data without her consent, (4) not to collect personal data in a wrong or fraudulent way, (5) to keep that data accurate and up-to-date, (6) to take necessary measures for safeguarding that data, (7) to monitor their data handling personnel and consignees, (8) to secure confidentiality of that data, (9) to open the purposes of that data utilization to the data subject or to the public, (10) to make the names of the enterprises and the purposes of that data utilization readily available, (11) to disclose or correct the data relating to the data subject at her request, (12) to suspend the utilization of that data at her request because of the misconduct regarding (2) or (3), and (13) to deal with complaints regarding personal data which they have.

Characteristics of the census data

A census is conducted in more than a hundred countries, and each has its own characteristics (Table 2).^{6,7,8,9,10,11,12,13,14} With the legal basis in the Statistic Law, the Japanese census collects the information of 17 items in a short form every 5 years, and 22 items in a long form every 10 years. Those items include each name of the family members, gender, birth date, educational history, household income, relationship to the head of the family, spousal relationship, nationality, the number of family members, the number of the elderly relatives at the age of 65 and more with whom the family live, the name of the employer, the type, content, and working hours of the job, the post at the company, the type, and size of the residence, and so forth. Hence, the statistics from the census have widely been utilized in making various policies, including policies on health and welfare. Meanwhile, Japan has other alternative ways to obtain similar information to what the census collects. However, the census data are indispensable in policy-making processes.

For instance, Japan has a national registration system of the residents, which is enacted by the Act on the National Basic Resident Register (NBRR). Through the NBRR system which each municipal authority manages, we can get

information of the registered residents of each municipality about their names, birth date, address, the number of family members. However, this registration system provides only the armchair data of the residential population who are legally registered there. It usually happens that many people who are listed on the NBRR do not actually live there any more. For some people who are institutionalized in nursing care facilities or inpatients, or most business bachelors or transient residents such as seasonal workers, students, foreigners and so forth, are entirely out of the register unless they notify their movement to the municipality. This phenomenon generally occurs in those areas where the social mobility of the population is high. Accordingly, the NBRR's data are always running behind the actual data of the population. On the other hand, the census targets all people including foreigners who live in each area at the time of the census survey, so that the data on population through the census survey are quite different from the one obtained through the NBRR system.¹⁵ Conceptually, therefore, the census provides more authentic and more reliable data than any other statistical source, and is thus the most important source for policy-making.

Table 1: Correspondence between OECD's eight principles and the APPI's requirements

OECD's principles	Corresponding requirements by the APPI	2003 Japan Law no./ article no.
Purpose	(1) To specify the purposes of personal data utilization.	L57/a15-1; L58/a3-1, a4; L59/a3-1, a4
Specification	(2) Not to use that data beyond these specified purposes without obtaining the consent of the	L57/a15-2, a16-1/-2; L58/a3-2/-3; L59/a3-2/-3
Use	(3) Not to transfer that data without her consent.	L57/a23-1; L58/a8-2; L59/a9-2
Limitation	(4) Not to collect personal data in a wrong or fraudulent way.	L57/a17; L58/a36-1; L59/a5
Collection	(5) To keep that data accurate and up-to-date.	L57/a19; L58/a5; L59/a6
Limitation	(6) To take necessary measures for safeguarding that data.	L57/a20; L58/a6-1; L59/a7-1
Data Quality	(7) To monitor their data handling personnel and consignees.	L57/a21, a22; L58/a6-2; L59/a7-2
Security	(8) To secure confidentiality of that data	L57/a34-2, a58; L58/a7; L59/a8
Safeguards	(9) To open the purposes of that data utilization to the data subject or to the public.	L57/a18-1; L58/a4; L59/a4
Openness & Individual Participation	(10) To make the names of the enterprises and the purposes of that data utilization readily	L57/a24-1; L58/a10-1; L59/a11-1
	(11) To disclose or correct the data relating to the data subject at her request.	L57/a25-1; L58/a12, a14; L59/a12, a14
	(12) To suspend the utilization of that data at her request because of the existence of a breach of (2) or (3)	L57/a27-1/-2; L58/a36-1; L59/a36-1
Accountability	(13) To deal with complaints regarding personal data which they have.	L57/a31; L58/a48; L59/a47

Table 2: Characteristics of Census in East Asian and Western countries

Country	Japan	China	Korea	USA	UK (England & Wales)	France	Canada (until 2001)	Canada (2006)	Australia (until 2001)	Australia (2006)
Population size	130 million	1.2 billion	47 million	280 million	52 million	62 million	31 million		18 million	
Number of households	49 million	348 million	15 million	105 million	21 million	30 million	11 million		9 million	
Census history	Since 1920	Since 1953	Since 1925	Since 1790	Since 1801	Since 1801	Since 1871		Since 1911	
Current cycle	Short census: every 5 yrs Long census: every 10 yrs	Every 10 yrs (since 1990)	Every 5 yrs	Every 10 yrs	Every 10 yrs	Annually (since 2004)	Every 5 yrs (since 1951)		Every 5 yrs (since 1961)	
Target population	Whole	Whole	Whole	Whole	Whole	Large commune: Sampling Small commune: Whole	Whole	Whole	Whole	Whole
No. of question items										
Short form	17 items at every 5 yrs	19 items for 90% h/h	21 items for all h/h	7 items for five in six h/h	40 items (common)	13 items for h/h	7 items for 80% h/h	8 items for 80% h/h	49 items (common)	59 items (common)
Long form	22 items at every 10 yrs	49 items for 10% h/h	44 items for 10% h/h	53 items for one in six h/h	40 items (common)	26 items for individuals	59 items for 20% h/h	53 items for 20% h/h		
Delivery method										
By officials	Yes	Yes (direct interview)	Yes (direct interview or sheet)	Yes (in rural areas or for apartments)	Yes	Yes (Rolling Census System since 2004)	Yes	Yes (1/3 of h/h)	Yes	Yes
Mailout	No	No	No	Yes (in urban areas)	No	No	No	Yes (2/3 of h/h)	No	No
Internet	No	No	Yes (since 2005)	Yes (in some areas)	No	No	No	Yes	No	Yes
Current way of collection										
By officials	Yes	Yes (direct interview)	Yes (direct interview)	Yes (followup mainly)	Yes (followup only)	Yes (Rolling Census System since 2004)	Yes (2%) (direct interview;	No (in remote, northern areas)	Yes	Yes
Mail return	Not recommended	No	No	Yes	Yes	No	Yes (98%)	Yes	Yes	Yes
Internet	No	No	Yes, but not strongly recommended. (since 2005)	Yes (short form only)	No	No	No	Yes (estimation is 20%)	No	Yes (estimation is 5-10%)
Latest census	Oct 2005 (Short census)	Nov 2000	Nov 2005	Apr 2000	Apr 2001	Jan-Feb 2006		2006		2006
Budget	\ 65 billion	No information	W 15 billion	\$ 6.5 billion	£ 207 million	€29 million	No info.	CAS\$ 567 million	No info.	No info.
Number census examiners	850,000	5 million	88,500	960,000	62,500	18,000	34,000	25,000	30,000	43,000
Total response rate	95.6%	No info.	No info.	67%	94%	No info.	97%	No info.	98%	No info.
Mail return rate	1.1%	None	No info.	55%	88%	No info.	No info.	No info.	No info.	No info.
Duplicated examination	None reported	No info.	No info.	770 thousand households (1.1%)	No info.	No info.	1.0%	No info.	No info.	No info.
Officials' status	Part-time (public servant)	No info.	Part-time (nonpublic worker)	Part-time (no details)	Part-time (no details)	Part-time (no details)	Part-time (no details)	Part-time (no details)	Part-time (no details)	Part-time (no details)
Legal authority	Statistics Law	Act on the 5th Whole Population <i>Put Cha</i>	Statistics Law	US Constitution (Article 1; Sec 2)	Census Act 1920 Census Order 2001	LOI n°2002-276 du 27 février 2002 relative à la démocratie de proximité	Statistics Act		Census and Statistics Act 1905	Electronic Transaction Act 1999
Penalty for unfulfillment	Max 6 month imprisonment or 100,000 fine or less	No info.	No info.	\$ 500 fine or less	£ 1,000 fine or less	€150 fine	Up to 3 month imprisonment or fine of up to CAS\$ 500		Fine of up to A\$ 100	
Precedent for penalty	None	No info.	No info.	No info.	92 cases in 2001	None	52 cases in 2001	No info.	No info.	No info.

Yrs; years.
h/h; households.
No info.; no information.

Similar to the UK,¹⁶ current government policy in Japan has moved towards evidence-based policy, confirming the central role of evidence in policy-making, especially with in the realm of medicine and public health. This is because “[a]ccurate statistics are part of the lifeblood of political debate”, and because without such reliable and complete population-based data, appropriate assessment of health status and trends in the population cannot be achieved.^{17, 18} Therefore, any system that requires voluntary participation to statistical databases would threaten the completeness, value and persuasiveness of such data for policy-making.¹⁸

Application of the census data

Combined with each other, the utilization of the information collected in the census is materialized, for instance, in the national policy development for mothers and children, called the “New Angel Plan”.¹⁹ The primary purpose of this national plan is to take immediate countermeasures against the critical dwindling birthrate. The Japanese government has therefore launched many projects under this plan such as 1) the development and promotion of the child-care leave systems; 2) the planning and the control of the national pediatric medical facilities, the nurseries, and their staff-reallocation; 3) the promotion of the working environments and conditions for the working mothers; and, 4) measures for late child-bearing.

At the same time, Japan also faces a critical increase of medical expenses for elderly people, as Japanese society undergoes an extraordinarily rapid aging process. The Statistics Bureau in the Ministry of Internal Affairs and Communication reports that the aging population rate in Japan over the age of 64 will reach 22.5 % in 2010, and 28.7 % in 2025.²⁰ Without immediate and effective political countermeasures, therefore, the Japanese social security system would collapse soon. Hence, the government has launched several political measures against this problem such as a national plan of supplying new elderly nursing-care facilities and the promotion of employment and the appropriate allocation of medical and nursing staff, and a social plan of striking a balance between expenses for pension and medical insurance and their allowances. What should not be overlooked here is the fact that those political countermeasures on health and welfare have all relied, more or less, on the census data which are continuously being collected.

Another good example of the census data application would be that of an improvement of the emergency medical service. The census data is combined with various mapping data by using the Geographic Information System to develop the Census Mapping System (CMS).²¹ Recently the CMS has come to contain not only horizontal but also vertical various types of geographical information of each area. Subsequently, this detailed computerized map is applied for plotting on the map each elderly person who lives alone or each disabled person, so that the subsequent digital image can help to improve the medical emergency services and the ambulance systems for those people.^{22, 23, 24}

Similar to these applications of census data in Japan, Australia also uses census data for the policy development of

women’s and children’s health services as well as for the policy of the aged: according to the Australian Bureau of Statistics, Census data was used, for instance, for mapping the target population for breast cancer clinics for an area health service in a larger city, and identified the areas most in need of new breast cancer clinics; the bureau also utilized the data of the number of children, by age, for funding allocation for existing child care centers.¹⁴

All of these examples clearly demonstrate how the national health and welfare policies will encounter serious difficulties if the quality of the statistical data developed from the census is diminished because of a high refusal/non-response rate or false reports.

Confusions and controversies over the census

The discussion about the pros and cons of the census has been going on for more than 25 years. The initial movement for an overhaul of the census procedures began in 1980. One study reports, for instance, that since the Census 1980 each no-answer rate for the question on educational history, spousal status, working status, and birth date, has drastically increased.²¹ However, such counter-waves have been relatively small until Japan experienced the biggest revolt ever from the public in 2005. This happened in conjunction with the passing of the APPI, and the heated debates about privacy in general that started in 2003 and led to a resurgence of privacy concerns among the public. The complete enforcement in 2005 of the APPI added additional fuel to the major criticisms about the intrusion of privacy by this particular census. Although the Statistics Law itself stipulates confidentiality concerning the Designated Statistics (Article 14) and penalties for the breach of confidentiality (Article 19-2), these provide only a superficial framework, and no specific safeguards to protect confidentiality are mentioned. Also, Article 18-2 of the Statistics Law on which the census as one of designated statistics is based explicitly states that “the personal information collected for the purpose of the Designated Statistics shall be exempt from the regulations of the protection of personal information concerned”.²⁵ This lack of requirement for specific safeguards in the collection of the census data probably reinforced the public’s privacy concerns. Several recent ethical scandals infringing on the protection of personal information,^{26, 27, 28} also contributed to the increasing skepticism among the Japanese about the collection of personal information in the census.

Let us here give some illustrative examples from news sources about what types of issues raised concern among the public. First, the protection of confidentiality was seen to be insufficient. Although the information to be collected includes sensitive personal information, the practice is that the response sheet must be collected face-to-face by a designated government official. The national government allows on the one hand that to protect privacy people can use a specific ‘non-postal’ envelope. On the other hand, however, the government also strongly discourages that one puts the sheet into the envelope and seals it for confidentiality. The census manual instructs the official who receives the sheet not to open its envelope to check its contents if the envelope is sealed. If on the other hand the envelope remains unsealed, then the official is strongly encouraged to check omissions, if any, immediately at each respondent’s house, and ask the respondent on the spot to fill in the blanks, so that the results of the census can be

accurate, and collected and published as quickly as possible for the subsequent policy-making purposes. Following the same reasoning, mailback is essentially not allowed either. This is in contrast with other countries, such as the US, where the government has started since 1970 to use mainly the mailout/mailback method to collect the responses because of privacy concerns, although a serious constant decline of response rate has started after then (e.g. the response rate in 2000 was 67%).²⁹ For all of these reasons, the Japanese government considers it preferable that a designated official can check and confirm each sheet face-to-face at each respondent's house for omissions or mistakes in her response sheet.

Second, there are problems with the types of persons who are in charge of collecting responses. They are recruited from ordinary local residents, who are temporarily employed as national officials. They go to their neighbors' houses and collect responses. The government explains that the main reason to use local residents is that those people know their local geographic and neighborhood characteristics and residents more than anyone else, so that the collection process can go smoothly and accurately. However, the number of those *instant* officials piles up to about 850,000,³⁰ and there is a lack of adequate education about privacy and confidentiality. One of those impromptu officials confessed in her weblog that the explanation that she was given before the response collection by a local government which employed her for the census was about 15 minutes, though the census manual had about 100 pages.³¹ If this applies to other impromptu officials as well, then many of them would accordingly lack a sense of protection of personal information. Similar issues arose in Japan's scandal of the cancer-research project in Kumano-cho, Hiroshima, which was severely criticized and halted because of its wrong data-collection process when it used ordinary citizens for the data-collection.³² In fact, the mass media reported every day during the census that many officials of the census breached confidentiality during the collection: some opened even the sealed envelope to check the sheets;³³ some lost the sheets;³⁴ and in one case the official burned the sheets instead of bringing them back to the office.³⁵

Third, there is a risk that the information in the response sheets as well as the census research itself may be used for crimes. In fact, the mass media reported in more than 40 cases during the census that people were defrauded of their response sheets.³⁶ In some cases people were defrauded even of the money.³⁷ People in urban areas, especially elderly and women who live alone, usually in a honeycombed apartment house, and who are therefore apt to be isolated from the community, have much more fear than others if their census information is abused. Accordingly, they tend to lock the door and reject any visit by unfamiliar persons including the authentic census official. These fears of crimes as well as the old-fashioned collection method which totally depends on the existent neighborhood relationships are considered as one of the major causes that the refusal/non-response rate recently in urban areas is higher than other areas (e.g. at the census 2000 the refusal/non-response rate in Tokyo was over three times higher (5.9%) than the average).³⁸

Finally, there are problems with cooperation by the people themselves. Some people ignored or just pretended to be out whenever a collecting official visit them.¹ The cooperation with the census is legally mandatory, and if an

individual refuses the cooperation the law can give a penalty of maximum a 6-month imprisonment or a fine of not exceeding 100,000 Yen (500 GBP). However, the number of people who breached the fulfillment of this duty has been increasing in the past 10 years: at the last census in 2000, 1.7% of households did not fulfill the duty, which was 4 times higher than that in 1995.^{39, 40, 41} A senior officer of statistics at a local government reported that the number of individuals who say, 'What does it matter? It's not my business,' or 'I just do not want to be bothered,' are certainly increasing.⁴²

Aftermath of the census and the APPI's after-effects

On 30 May, 2006, the Japanese government reported the aftermath of the census 2005. Markedly high refusal/non-response rates were observed in most of the urban areas as anticipated: 13.3% in Tokyo, 6.8% in Miyagi, 6.1% in Kyoto and Fukuoka, 5.4% in Osaka. Also the highest refusal/non-response rate ever also hit rural areas.⁴³ The government also reported that the total refusal/non-response rate was 4.4%.⁴¹

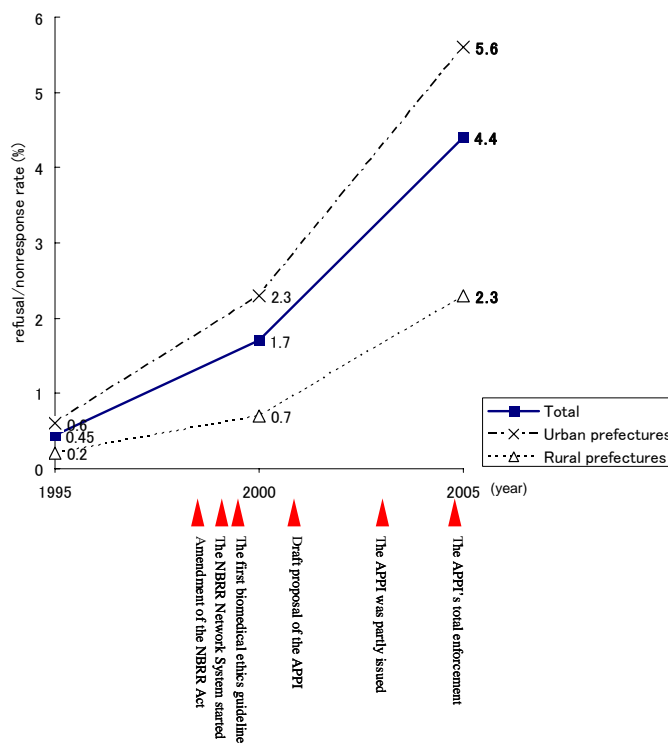


Figure 1: Transition of Refusal/Non-response Rate for Census in Japan.

Figure 1 demonstrates the transition of the refusal/non-response rate for the census in the last 15 years.⁴⁴ Until the Census 1995 the refusal/non-response rate had remained quite low. However, the amendment of the Act on the NBRR in 1999, by which the government aimed to construct a national digital network system for registering all people in Japan by giving each certificate code of residence, boosted a nationwide debate on the control and breach of privacy by the government. The debate for and against the NBRR network system negatively affected the Census 2000 that resulted in an increase in the refusal/non-response rate. This debate has clearly strengthened the people's subsequent misinterpretation of the APPI and their extraordinarily defensive attitudes against the disclosure of their personal information. Consequently, such an

excessive repulsion that was waiting to happen has occurred in 2005.

The APPI has also severely affected other areas, including public opinion polls. The government announced that since the complete enforcement of the APPI, the response rate for any type of government-initiated public poll or survey, which usually gets 10% higher response rate than non-governmental ones, has greatly dropped to the 50% mark from 70% mark.^{45, 46} A newspaper also reported another example of the APPI's aftereffects on people's health and welfare: It says that many residents' associations now encounter hardship to make the name list of those elderly and/or disabled who will need help first and foremost when a disaster occurs.^{47, 48} Meanwhile, many schools have reported the same difficulty in making the name list of emergency call networks for their pupils and students.⁴⁹

Japan is not the only one country that is experiencing a large impact of data protection legislation. The UK has more than a 20-year history of such. The UK adopted first in 1984 the Data Protection Act (DPA), that was then amended in 1998. The Academy of Medical Sciences has reported recently that because of the misinterpretation of the DPA, many medical institutions in the UK have refused to provide patient's data and information for responsible medical studies on disease prevention such as cancer registration which were primarily for the public good.⁵⁰

In Japan too we observe that the enactment of data protection legislation affect registry data. On 8 January, 2004, after the partial enactment of the APPI, the Ministry of Health, Labour and Welfare announced to all local governments that the cancer registration is to be excluded from the regulation by the APPI just as the Statistics Law. However, a newspaper reported that 10 out of 35 prefectural governments in Japan which execute cancer registration have admitted that many local hospitals actually refuse to provide cancer patients' data and information to the registration because of the misunderstanding of the APPI.⁵¹ It has even come to light in the Hyogo prefecture in 2005 that the Hyogo's cancer registration was already halted in 2001 on the basis of its Ordinance on Protection of Personal Information enacted in 1997.⁵²

Steps and challenges for future census

Shocked by the critical consequence of the Census 2005, the Japanese national government formed an expert conference on the census since January 2006, and has decided to take steps to review the census procedures so as to retrieve people's trust in the census. The main recommendation is to change the method of data collection. It is, however, doubtful whether this would solve some of the underlying problems.

The Government views it as preferable to prepare diverse options for the delivery/collection processes such as mailout/mailback or internet as is done in the United States, the UK, or Korea.⁵³ Especially, it considers that a mailout/mailback system would be the first choice because it is expected to be more convenient for each household, and because it may thus reduce a burden to the census examiners as well as labor cost for the census, and therefore enable a cutback in the number of examiners. Actually, thanks to the introduction of a mail return system the UK succeeded in reducing the number of the census staff in 2001 to two-thirds of that in 1991.⁶

On the other hand, however, preparing multiple options would make the whole census process much more complicated, or sometimes more costly than expected, and may cause more errors or omissions. In fact, the US Census 2000 experienced a significant increase of the total errors and uncertain cases more than that in 1990.⁵⁴ It was also reported that by mistake 770 thousand households who had mailed their responses back were re-examined by a census examiner.⁶ Meanwhile, it is true that this mailout/mailback system must depend on the individual high sense of responsibility to respond to the census without delay and without any omissions on the sheet. If each responder does not take this responsibility, extra work and costs for the subsequent follow-up visit will be required. In fact, the US Census 2000 had to employ 960 thousand examiners for the follow-up of 1.2 million fewer households in the end, causing the taxpayers to cost extra 35 dollars for each repeated visits to a single household.⁵⁵ Furthermore, however many promises are made to protect confidentiality through a change of the system of approaching the population, public resistance to what is viewed as intrusive in the census would not be satisfied because what most influences people's decision to cooperate with the census may not be attitudes about just confidentiality, but rather attitudes about privacy in general.⁵⁶ Now that the public sees a threat to privacy as a threat to confidentiality and vice versa, and this attitude towards privacy and confidentiality concerns would result in "a more diffuse, general, and perhaps extreme reaction to the census".^{57, 58} Therefore, a mere introduction of a mailout/mailback system does not necessarily seem to solve many of the current problems over the census.

The government also views the application of the internet to the census as preferable.⁵³ However, even the application of internet does not seem a better option either. For example, Korea, which leads the world in the diffusion rate of internet and which has introduced internet into the census response, did not actually recommend a response via internet because it took long to input the Web-based census sheet and therefore a significant drop of the quality of response was anticipated.⁶ Meanwhile, to build a Web-based census system requires huge amount of money. Despite of this fact, it is the reality that only one percent all households in Korea actually utilized the Web-based census in 2005.⁶ Moreover, there is another concern about the use of internet for the census. What concerns people as well as the government is how one should protect personal information. The important question is whether the use of the internet really addresses this concern? The mass media reports almost every day a case of information leakage through the internet. Therefore, the premise that the use of internet in the census will secure individual information much better than the current collection method would probably be rejected by the public.

Conclusion and recommendations

We have argued that concerns about privacy in conjunction with the introduction of data protection legislation in Japan have led to problems for the national census. The Government has mainly responded by changing data collection from the use of staff visiting homes to the use of a mailback system or use of the internet. We are doubtful that these will address peoples' privacy concerns and we think they will not increase the efficiency of data collection. In order to achieve that, we would recommend the following.

First, the data protection part of the Statistics Law governing the census should be strengthened. The Law as it stands now is exempt from the APPI and simply has a general requirement to protect confidentiality. Although some of the specific requirements of a general data protection law may not be applicable in the census settings, it would be necessary to provide specific enough safeguards to protect confidentiality to maintain public trust in the process. With the introduction of data protection legislation in Japan there is now a heightened awareness of issues of privacy among the public. It is therefore no longer sufficient for the Government to give a blanket exemption for the census with only a general provision for the protection of confidentiality.

One example of this approach might be the Data Protection Directive of the European Union.⁵⁹ This Directive applies to all processing of personal information, but exemptions are given if specified by national law or there is a substantial public interest in processing the data, subject to suitable specific safeguards. This requires even exempt to be subject to the general principles of data protection, and is preferable to the general exemption without conditions which is the current situation in Japan.

Second, concerning fraud or crimes during the census, measures applied in some communes in France could provide a useful model. In several communes there the census receives local publicity via the internet or on a public relations brochure, on which a photograph of each census examiner's face with her real name is open to the public.⁷ This method seems very effective to prevent crimes relating to fraud on the response sheets or elsewhere. Moreover, it would be a good option to put a census poster with the designated examiner's face photo, her name, and a timetable of her visit to each household on the entrance wall of each apartment house. On the other hand, one possible concern over the introduction of these measures is that it may cause a critical fall in the number of potential census examiners, because they would also worry about their own privacy. Hence, cautious steps and further debate should be necessary over this matter.

Third, regarding training of the census examiners, the government should have a long-term vision of how to train census workers and, at the same time, how to maintain and ensure experienced and high-quality examiners. In fact, it was only 40.6% of the impromptu census officials in 2005 that have had a working experience as a census examiner before.⁶ However, according to a post-census survey for the census officials in Yokohama City, in which their future willingness to work again as an examiner was studied, 53.6% of the officials refused an appointment, and only 17.3% answered they would take it again.⁶⁰ Without such a sustained vision, therefore, the census would not be able to keep the quality of data as well as the examiner's strong sense of responsibility for the census.

Fourth, the mass media should properly engage in and contribute to the process of re-building trust in the census between the public and the government. Most of the news concerning the Census 2005 appeared on the newspapers were one-sided that reported only the negative aspects or incidents concerning personal data collection in the course of the census. The media as well as public health scientists and policy-makers all must "have a part to play in ensuring accurate portrayals of research results and to engender an informed discussion" about the nature and the results of the census.¹⁸ The news we referred to in this manuscript were all that the public in Japan could

know about the census in 2005, even though many of them might be based on un-evidenced assumptions or mere anecdotes about the census.

Fifth, the government needs to promote people's proper understanding of the nature of public research and the protection rules of privacy/confidentiality in the research process, fostering their responsible attitudes for others in the society. This cannot be achieved just through making policies or changing research system, but rather through moral education. To secure people's personal information is the government's responsibility. To join in the health/welfare policy-making is the people's moral responsibility and social obligation. Although fostering such ethics among the society would be a critical challenge, only trustful partnerships and a sense of shared moral endeavor can achieve valuable health/welfare policy-making and the real protection of privacy and confidentiality. Either the government's irresponsibility or the rapid chaotic growth of the sense of self and privacy would destroy Japan's public health in the very near future.

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Commentary on Matsui and Lie's Paper

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Reading Matsui and Lie's paper, I tried to recall whether I had been interviewed by a census worker when the latest National Population Census was carried out, and then I was

astonished to realize that I have never experienced the Population Census interviews since I started living independently when I entered college almost 30 years ago. Judging from my experience, it seems that the census system has not properly functioned for a long period of time in Japan.

The authors' recommendations will surely be helpful to improve the current census system. Here, I would like to add some comments that came to my mind when reading their recommendations. First, the authors recommend training the census examiners and improving their skills as interviewers. While I believe this is an important step to improve the current system, I wonder whether the training of the examiners could actually increase the number of responses from ordinary citizens. Younger generations, especially living in big cities, have a strong sense of privacy, hence, some revolutionary ideas to persuade younger people to join the census are needed. Older generations are also hesitant to disclose their privacy because they fear someone might sneak a look inside their home and compare it with other people living nearby. They are afraid that they are compared with other people, and their way of living is judged to be different from the average lifestyle of their neighbors. When moving away to a new house, some housewives prefer their luggage on the carrier to be neatly covered so as not to be seen by anyone passing by. I believe this mentality should be one of the biggest obstacles we have to overcome. But anyway, I don't come up with any good ideas to solve this problem.

The second thing I would like to add is whether it is possible to explain to the respondents the reason why such and such questions should be indispensable to the census. Japanese people are becoming sensitive about their privacy, hence it might occur in the next national census that many respondents ask the census examiners about the purpose of the questions they are hesitant to response. They might ask the examiners why they have to answer, for example, their room size or the number of residents. In such a case, is it actually possible for the examiners to provide an adequate answer to that question? Matsui and Lie talk about a long-term training of census workers. I wonder if the content of such training programs is to contain an understanding of the theoretical background of census research, or just the know-how of answering frequently asked questions. Those who are hesitant to disclose their private information are usually very sensitive about the way how the information is to be utilized by the government. Hence, the required skill of census workers might become considerably higher than what is anticipated today.

It might be that the most effective way of collecting accurate data from ordinary citizens is to impose actual sanctions on those who refuse to disclose their private information, or to buy the data from private companies specializing in information gathering. Anyway, it is very difficult for the Japanese government to foster people's responsible attitudes for others, because many ordinary citizens do not believe in the morality of the Japanese government itself.
