

Technology and citizens: A case study of the first citizens' jury in South Korea

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Abstract

Due to technical complexity, most public policies in technological society are dominated by expert-centrism and technocracy, based on the belief that they should be the exclusive realm of technical experts. This is particularly true in Korea's public policy cultures even after democratization of Korean society. But globally, technocratic policy-making culture is faced with challenges. I analyze the democratic implications of the Korean experience of the citizens' jury, a form of citizens' deliberative participation. I examine the citizens' jury on the National Pandemic (particularly *Avian Influenza*) Response System in 2008, which was the first case of the citizens' jury in Korea. Fourteen members of randomly selected citizens' jury spent four weekend days across two weeks learning and deliberating Korean government's Avian Influenza policy. I conclude by identifying its democratic implications in Korean society.

Introduction

In Korea there have been a number of attempts at citizens' participation in technical public issues in the past few years. On the one hand, there are several examples of social movement-type participation, including anti-nuclear, anti-GMO, and candlelight vigils against the import of US beef.¹ On the other hand, cases of institutional participation are membership in government commissions and deliberative civic engagement such as in consensus conferences or citizens' jury. While social movement-type participation is a highly important form of citizens' involvement, in this article, I examine institutional participation and deliberative civic engagement.

Of the different forms of deliberative civic engagement, I analyze the citizens' jury that was newly attempted in Korea by the Center for Democracy in Science and Technology (CDST), particularly in terms of its implications on democracy of Korean society. As major methodological frameworks, I employ participant observation in conjunction with survey research. When the government started this citizens' jury project, the author of this article took a role as project manager and organized the jury, led the discussions, and made the report to the government. Therefore, I was in a position to observe the process of the country's first citizens' jury. I also used survey research with participants at the end of the work. The major questions are about their experience as a jury, their understanding of the process, and their recommendations to the future forms of the citizens' jury.

Deliberative Civic Engagement: Consensus Conference vs. Citizens' Jury

¹ Hundreds of thousands of Koreans rallied daily in Seoul in May 2008, because the government decided to reimport beef from the U.S. in April. The Korean market had been shut for the past four and a half years following the first US case of mad cow disease in 2003. During the rally, they lit candles and chanted slogans criticizing President Lee Myung-bak.

The best known type of citizens' participation through deliberation in Korea was consensus conference. Consensus conference has become known since it was attempted by the CDST in 1998 (GMO), 1999 (cloning technology), and 2004 (nuclear energy). It was then used as a model for the Open Citizens' Forum implemented by the Korean Institute of Science and Technology Evaluation and Planning (KISTEP) in 2006 and 2007, as a form of participatory technological impact assessment. However all the consensus conferences in Korea relied on self-selection method in terms of recruitment of participants.

In this regard, it can be said that citizens' jury is the first deliberative forum in Korea which used random selection method. It was held as a process of careful deliberation by a group of randomly selected citizens on publicly important issues for four-five days. The citizen jurors received some compensation for their participation as they listened to testimonies by expert witnesses, discussed and deliberated on the possible solutions. Expert testimonies offered varying perspectives and arguments, and the jurors participated in a testimonial process conducted as a question-and-answer session. The final opinion of the citizens' jury produced after such process was submitted to government as non-binding policy recommendations.

Citizens' Jury on the National Pandemic Response System

Technology Assessment and National Pandemic Response System

According to Korea's Basic Act on Science and Technology of 2001, the Ministry of Education, Science and Technology must select new technologies that might be socially controversial and undertake technology assessments every year through the government-invested research center, known as KISTEP. The assessment should be performed by experts and ordinary citizens, and

the outcome must be reflected in national policies.² Such assessment by citizens was conducted by KISTEP in 2006 and 2007 under the title of “Open Citizens' Forum.” It was modeled after the consensus conference widely used in Western countries.

In 2008, KISTEP commissioned the assessment project to the CDST, a non-profit NGO that has been active in improving citizens' participation in the field of science and technology. Upon being commissioned, the CDST began to look for a model that is more advanced than the Open Citizens' Forum based on the consensus conferences held in the previous two years. In the end they decided to try the citizens' jury for the first time in Korea, for which members are randomly selected, unlike the consensus conference for which they are self-selected. The selection committee chose the NPRS as the target for the technology assessment in 2008. Since the scope would be overwhelmingly large, the Committee narrowed it down to zoonosis (avian influenza)—infectious diseases by biological terrorism using anthrax and new infectious diseases from climate change, and the administration team decided to limit the topic to national pandemic caused by avian influenza.

Avian influenza (AI) is generally called the "bird flu" or "bird influenza." It is an acute infectious disease that occurs through infection by the avian influenza virus, a devastating disease with almost 100% mortality rate that causes acute respiratory symptoms in chickens, turkeys and other poultry. The problem became even more serious as it was recently discovered that it infects not only poultry but also human beings. Since the first case of human mortality from AI type-A H5N1 virus occurred in Hong Kong in 1997, there have been growing concerns of a pandemic from a new influenza. In fact, the avian influenza H5N1 that occurred in East Asia

² Technology assessment is one of the technology policies for social integration where the positive and negative impact of technology on human beings, society, culture, politics, and economy is assessed beforehand to minimize any negativity. It is more regulatory toward technology than enabling, and its institutionalization indicates a process of technology politics.

and Southeast Asia has been jumping geographic and species boundaries since late 2003. From late 2003 to June 2007, there were officially 317 cases of human infection of H5N1 in 12 countries, of which 191 ended in deaths (60.3%). There are even reports of suspected human-to-human infection, although these are very limited.

If the AI virus keeps evolving through gene mutation and becomes capable of efficient human-to-human infection, it could lead to Pandemic Influenza (PI), which could cause up to 100 million deaths around the world. In fact, the 1918 Spanish Flu, one of the biggest catastrophes in human history, that took 40 million lives or 1% of the global population at the time, was recently found to have been caused by the AI virus. As the most recent AI problem grew in scale, the World Health Organization announced a guideline on planning against PI in 1999 and 2005, urging each country to create a specific and doable step-by-step national contingency plan suitable to their own circumstances. The Korean government also has a PI response system of its own led by the Disease Control Center of the National Institute of Health.

Composition of the Citizens' Jury

The citizens' jury is largely made up of the advisory committee, expert witnesses, and the jury. The citizens' jury on the NPRS was organized based on the following frameworks. First, the project management team (three members) created an advisory committee made up of experts who could advise them on the administration of the project and recruitment of experts. The committee was made up of members with technical expertise in the topic of "NPRS against AI" as well as experts in social sciences.³ Participants for the jury were selected through random

³ A total of five members were appointed in the advisory committee (1 social sciences expert, 2 medical experts, 1 healthcare NGO expert and 1 KISTEP member). In addition, eight experts who deliver lectures to the jury and answer their questions during deliberation were selected out of the advisory committee's nominations. They were

sampling by a professional survey organization. The project management team, with the goal of selecting 15 members reflecting the demographics, outsourced the selection process to Media Research, a consulting company, to come up with a list of candidates, men and women over the age of 19 living in Seoul or Gyeonggi Do (Province). It was the first attempt at random selection of citizen jurors in Korea although the population had to be limited to Seoul and Gyeonggi due to budgetary reasons.

Media Research went to work with the goal of selecting 135 candidates, or three times the required number of 45. They first randomly extracted 135,000 phone numbers, and successfully contacted 5,500. Of them, 118 expressed willingness to participate in the citizens' jury. The 118 were grouped by demographic characteristics, and a final list of 59 was sent to the project management team. The team randomly selected 16 candidates out of this list. The final citizens' jury consisted of 14 out of the 16. Demographics of the final 14 citizen jurors were as follows (Table 2): eight women and six men,⁴ ages from early 20s to 70s, residing in large cities, small cities or rural areas, with occupations including unemployed, housewife, student, self-owned business and professional.

Table 2. List of the Citizens' Jury

Gender	Age	Occupation	Region
M	47	Self-owned business (interior decoration)	Anyang, Gyeonggi Do
F	25	Civil servant (contract position at a public clinic)	Guro, Seoul
F	44	Nursery teacher	Dobong, Seoul

experts who represented the government's health authority, academia, and NGOs (Doctors' Council for Humanitarianism, Veterinarians' Alliance for National Health).

⁴ The gender ratio was 8:8 in the beginning, but both of those who pulled out of the final citizens' jury were men, making the final ratio 6:8. Those who participated as jurors were paid 400 US dollar each.

M	31	Internet shopping mall	Youngdeungpo, Seoul
M	27	Hospital physiotherapist	Bucheon, Gyeonggi Do
F	51	Housewife	Paju, Gyeonggi Do
F	53	Counselor at Private Study Institute	Songpa, Seoul
F	45	Health food business	Guri, Gyeonggi Do
M	66	Self-owned business (real estate)	Dongdaemun, Seoul
F	62	Freelancer (English tutor)	Seongnam, Gyeonggi Do
M	55	Self-owned business (mail-delivered study aid)	Gimpo, Gyeonggi Do
F	70	Unemployed	Suwon, Gyeonggi Do
M	40	Financial institution	Paju, Gyeonggi Do
F	22	University student	Gangbuk Seoul

Process and Outcome of the Citizens' Jury

Members of the citizens' jury listened to the presentations by different experts, asked questions, held their own discussions and came to their final assessment and policy recommendations. To help the jurors draw their conclusion and policy recommendations, the management team produced, with the help of the advisors, a list of questions to be answered by the jury. These questions were designed to clearly illustrate the jurors' views on the NPRS. The questions are largely grouped into four categories. The first group of questions are regarding the possibility of a national pandemic occurring from AI; the second group are on the state of readiness of Korea against such a national pandemic; the third and fourth are on the policy recommendations to improve the response system. These questions are as follows: What is the likelihood of a national pandemic occurring in Korea due to the Avian Influenza?, How would you rate Korea's response system against a possible outbreak of a national pandemic?, What are the areas of improvement

necessary to ensure effective readiness and response against a national pandemic?, and What are the ways of enhancing citizens' understanding and confidence in the National Response System?

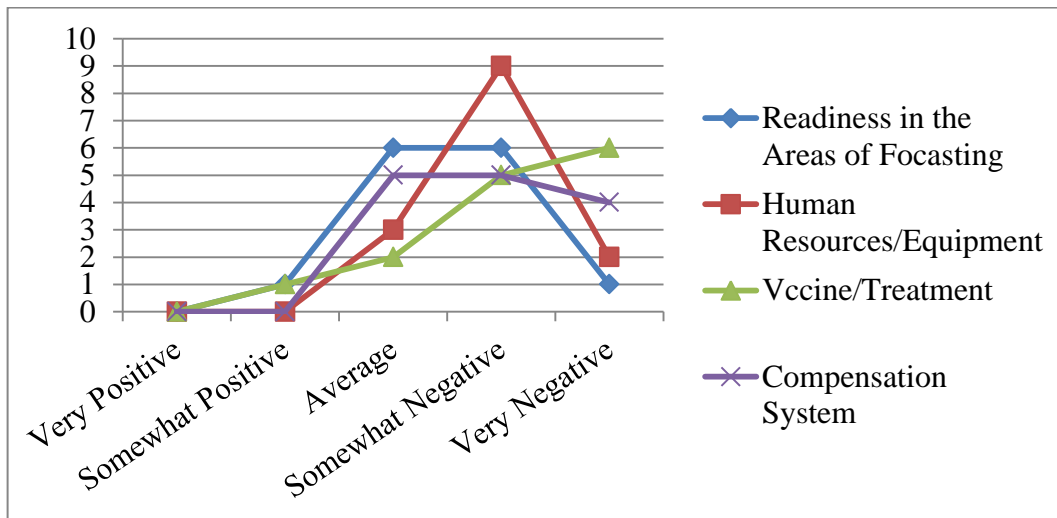
To form a well thought-out response to the four questions, the citizens' jury was convened at a hotel meeting room in Seoul on four weekend days across two weeks: The first was the period August 30-31 (Saturday and Sunday) and the second was the period September 6-7, 2008. For four days, there were testimonies by eight experts, questions and answers, and discussions by the whole jury or by sub-groups. On the last day, the opinions of the citizen jurors were collected. Opinion gathering was conducted through the following process.

First, regarding questions 1 and 2 that are about current conditions, they were asked to give a rating out of a scale of five. Secondly, for questions 3 and 4, a multitude of views were expressed through jury discussions. After several rounds of discussion, similar views were consolidated, other views were modified, and the final opinions were put together in a list. Lastly, they voted on the list of final opinions to identify the jurors' differing preferences. Each juror had votes in the number that was half of the number of opinions. But to ensure that various views are expressed, the number of votes that can be given for one opinion was limited. For example, they were able to give up to five votes for one opinion under question three, and up to three votes under question four. And they were also given veto power to be able to express themselves clearly on sharply contested opinions. The number of veto power was in proportion to voting rights: up to five under question 3 and up to three under question 4. But they were reminded that they were not required to exercise the veto power, unlike the voting right.

The citizens' jury's assessment of the NPRS is as follows. They saw the likelihood of a national pandemic occurring due to AI to be relatively low, giving it a score of 1.79 out of a scale of 0-4 (higher score indicating a higher risk). But many voiced the view that much work

has to be done to prevent it because if it does occur, the damage would be quite extensive. Regarding Korea's readiness in the areas of forecasting, human resources/equipment, vaccine/treatment and compensation, their evaluation was unfavorable, giving it a score of 1.5 out of a scale of 0-4, with 4 being the most favorable and 0 being the least. They thought that the readiness was especially insufficient in the area of vaccine or treatment (0.86). The best score was given to forecasting, but it was still a very low 1.5 (Figure 1).

Figure 1. Korea's Readiness in the National Pandemic Response System



Regarding questions on improvement of the response system, a total of 25 opinions were collected through jury discussion.⁵ Thus each juror was given 13 votes and 5 vetoes, which made the total number of votes 182. The number of vetoes used was 11. As for this question, the following opinions were expressed: "Stronger regulation against overuse of antibiotics and growth hormones used on poultry" (17 votes), "To secure manpower dedicated to quarantine and

⁵ The total number of opinions submitted by the jurors regarding this question was 47 in the beginning. Through mutual discussion, they narrowed them down to 25, having consolidated similar ones and discarded those that were deemed meaningless. The process of narrowing down the opinions itself could be seen as the process of deliberation.

disposal of poultry, provide specialized training, and strengthen follow-up monitoring" (13), "Ongoing monitoring/supervision and communication to prevent secondary damages from poultry disposal such as environmental contamination" (13), "To implement early blockade (access restriction) to prevent spreading of the AI and strengthen quarantine system" (12), "To install an organization dedicated to developing and producing AI vaccine and treatment, and encourage private investment" (12), "To strengthen surveillance on sites with history of AI outbreak or likelihood of future outbreak (migratory bird sites, animal farm sites)" (11), "To secure a stock of treatment drugs (Tamiflu, etc.) enough for at least 20% of the population" (10).

Lastly, regarding the question on how to enhance understanding and confidence in the NPRS, a total of 11 opinions were generated through jury discussion. Each juror was thus given six votes and three vetoes. There were 84 total votes and 10 total vetoes used. The expressed opinions were: "To use more public communication through cinemas or TV for the purpose of prevention education" (16 votes), "To create an institutional environment enabling the media to provide sufficient information without over/under-reporting" (13), "For the local media and local authorities to provide active education and communication targeting local residents" (11), "To increase citizens' online/offline participation in developing the national pandemic forecasting and response system and in the process of public communication" (10).

Implications of the Citizens' Jury on Democracy

There are several significant implications of Korea's first citizens' jury. To begin with, random selection, as opposed to self-selection, is important in that the jurors would be more similar to ordinary citizens: this increases the demographic representation of the jurors. If volunteers are recruited through newspaper advertisement (as is the case for consensus conference), such self-

selection would result in participation by only those who are interested in the subject matter, not ordinary citizens. The conclusion from such gathering cannot necessarily be an appropriate representation of ordinary citizens' views. Past juries in Korea were not free from such limitation because they were organized through self-selection. It could even be a fatal limitation as in some cases when socially delicate issues are addressed, those with interests in the issues could volunteer for the citizens' jury while hiding their purpose or intent. Such a case of false volunteers actually happened in 2004 in the consensus conference on nuclear power generation.⁶ Random selection for the citizens' jury can preclude such problems from the beginning.

The citizens' jury on the NPRS was organized through random selection; therefore, its composition was quite varied in terms of places of residence, occupations, education, and age. Compared to the consensus conference where the members are selected from volunteers, citizens' jury has some advantages due to its recruitment method. Of course, the nature of random selection makes it difficult to induce the utmost dedication from the participants.

Secondly, this citizens' jury implies the possibility of deliberative democracy in the realm of science and technology. From the beginning, we were concerned about the lack of proactiveness among the jurors in their attitude toward expert testimonies and discussion. However, their attitude changed visibly from the second of the four day sessions. Through the process of small group discussion (among five members) followed by general discussion, the members became friendlier with each other and gained higher understanding of the subject matter. They became much more active in their approach toward expert testimonies and internal discussion. When we asked the participants to fill out a survey form regarding the various

⁶ A member of a housewives group in favor of nuclear energy volunteered for a citizens' panel without disclosing her membership in the group. The fact was discovered during the interview process. It was a lucky case of prior discovery, but such a problem of false volunteers remains as long as citizen panels are organized with volunteers.

aspects of the citizens' jury program during the last day, the result showed that 9 out of 14 responded "Very much so" to the question on whether they were satisfied with the attitude displayed by other citizen jurors, while the remaining 5 answered "Generally so." This is an indirect indicator of the positive evaluation of the citizens themselves of the active participation of fellow citizen jurors. One juror indeed said, "I was not sure about the quality of the citizens' jury because I was selected randomly; however, I was very impressed because participants worked hard during the process."

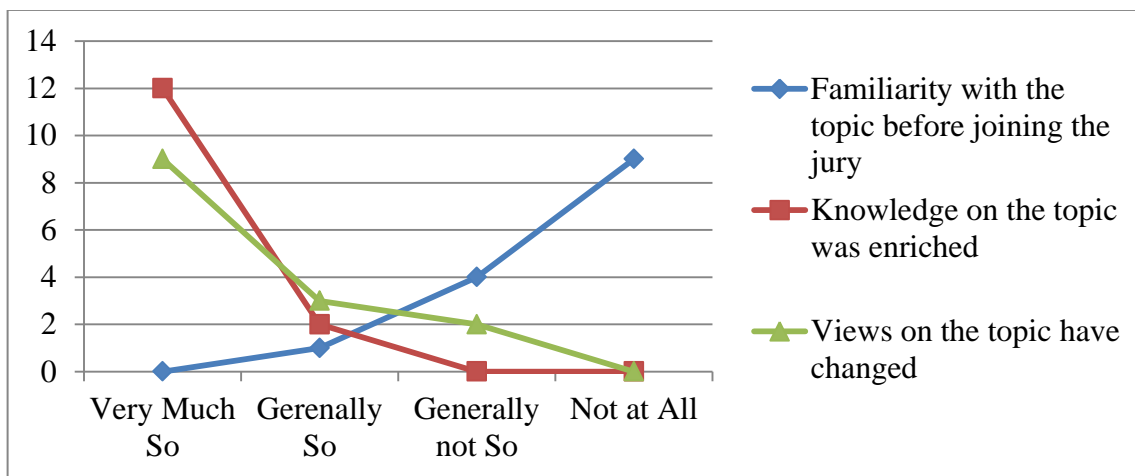
Finally, but not the least, the flip side of the same token also proves the significance of the citizens' jury. As time goes by, some of the expert witnesses expressed their surprise at the sharp and to-the-point questions raised by the citizen jurors.⁷ If such randomly selected citizens lack the ability to deliberate on public policy issues, especially those of technical complexity, and are thus unable to make rational judgments on the topic, the citizens' jury cannot take root as an institution that can strengthen democracy. However, although it would be clearly impossible for ordinary citizens to acquire expert-level technical understanding in a short period of time, the jury's experience proves that even ordinary citizens can participate, with a certain basis of knowledge, in the learning, discussion and decision-making process of highly technical and complex issues if the process of deliberation is designed in a way that can pique their interest.

Results of the aforementioned evaluation form appear to support such an assessment. To the question on whether they were familiar with the topic before joining the citizens' jury, only one person responded "Generally so," while nine answered, "Not at all" and four "Generally not so." This shows that they were initially lacking in knowledge on the topic. To the question on

⁷ One of the factors that enabled such sharpness of the citizen jurors' questions appears to be the meeting format where expert witnesses with opposing views regarding the same issue conducted presentations. It seems that through such competing presentations, the jurors were able to get a better understanding of the subject matter and attained the ability to conduct a type of cross examination on expert witnesses.

whether their knowledge on the topic was enriched through this experience, twelve responded "Very much so," while two answered, "Generally so." This shows that their basis of knowledge was dramatically strengthened through the discussions. Meanwhile, to the question on whether their views regarding the topic have changed after the discussion, nine answered, "Very much so," three responded, "Generally so," while only two picked "Generally not so" (Figure 2).

Figure 2 Changes in Citizen Jurors' Understanding on the National Disaster System



This means that there have been considerable changes to the citizen jurors' preferences regarding the issue. The deliberative procedures affect in a significant and positive manner the character of the jury in which they take place. Throughout the meetings, the jurors became more informed than before so that they were willing to shift their opinions in light of new knowledge. Of course experts are in an advantaged position in technology-related decisions; however, when the system, such as citizens' jury, provides an arrangement for expert to explain and train lay citizens, participants are able to make reliable decisions. Regardless of the fact that the citizens' jury's report is a non-binding policy suggestion, therefore, this form of deliberative democracy implies that informed citizens could provide meaningful policy alternatives.

Conclusion

This paper has analyzed deliberative civic engagement with the case of Korea's first citizens' jury. It has examined whether the citizens' jury is effective in resolving the gap between technocracy and citizenry in our technological society. I spent days and nights with the citizen jurors and were able to observe them in formal and informal settings and listen to what they say with full attention, and we perceived that their level of understanding, concentration and discussion ability went up considerably over time.

Indeed, the jurors themselves were seen to feel quite proud of such change. One of the questions in the evaluation form was whether there have been any changes in their views regarding citizens' participation in the process of national policy discussion. Only one responded, "my views changed more toward the negative than positive," while seven answered, "my views became fully positive," and six chose, "my views changed more toward the positive than negative." This can be understood as an expression of their pride in the development of their deliberative ability. This point is well illustrated by the following statement written by a participant in his evaluation of the citizens' jury.

“When I decided to participate in the citizens' jury, which is a new and unfamiliar concept to me, I was worried and skeptical about what I can do with no expert knowledge or whether I can have any influence on something as big as policy recommendations. However, when we produced our policy recommendations to the government after listening to expert presentations, asking questions, and discussing with other ordinary citizens like myself, I felt proud as a citizen of a nation. I believe that being able to voice our views through such opportunity would be one shortcut to future development, and I hope that the government and the private sector would more actively develop such a program.”

This means that the citizens' jury has demonstrated that through a systematic deliberation process, citizens with no expert knowledge can develop deliberative ability to make judgments on somewhat complex technical issues.

Of course, the citizens' jury process is not without its limitations, although the citizens' jury has the potential to deepen democracy. The biggest would be the problem of representation. It is true that arbitrariness and bias in the jury composition could be avoided to a certain extent through random selection, but a membership of around 15 would be too small to have full demographic representation. Thus for the citizens' jury to become a truly powerful decision-making unit, it should be carefully designed to have the size that is sufficient to claim representation without undermining in-depth deliberation. Only then will the citizens' jury become a powerful institutional basis for public policy-making that can usher in deliberative participatory democracy, not opinion-gathering democracy.