Israel Public Policy Institute

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German-Israeli Tech Policy Dialog Program / November 2020

Invisible Surveillance, Indifferent Publics

Israeli Perceptions of Voluntary Contact Tracing
Applications vs. Mandatory General Secret Service
Surveillance during the COVID-19 Pandemic

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and Nigmeh Kadan**

Rethinking Privacy and
Mass Surveillance in the
Information Age

Paper Series by the Israel
Public Policy Institute and
Heinrich-Böll-Stiftung

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About the Project

The following paper has been commissioned by the Heinrich Böll Foundation and the Israel Public Policy Institute (IPPI) as part of the paper series "Rethinking Privacy and Mass Surveillance in the Information Age." Against the backdrop of the COVID-19 pandemic, this publication series has set out to examine the societal and political implications of the spillover of surveillance technologies from the security sphere into everyday life.

About the German-Israel Tech Policy Dialog Program

The paper series "Rethinking Privacy and Mass Surveillance in the Information Age" is part of the German-Israeli Tech Policy Dialog program of the Heinrich Böll Foundation and the Israel Public Policy Institute (IPPI). By facilitating a collaborative space for researchers and practitioners from politics, academia, tech and civil society, the program sets out to cultivate a community of committed professionals from both countries to deliberate the impact and governance of emerging technologies and to generate new actionable insights in support of democratic values.
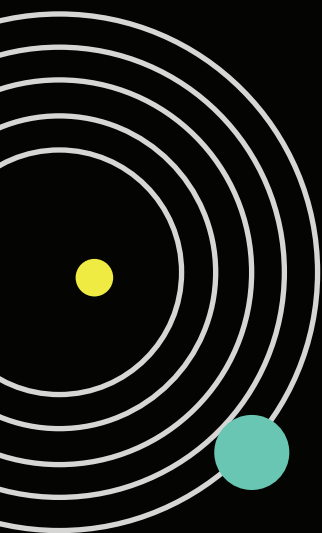
Israel Public Policy Institute (IPPI)

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The Heinrich Böll Foundation is an independent global think-and-do-tank for green visions. With its international network of 33 international offices, the foundation works with well over 100 project partners in more than 60 countries. The foundation's work in Israel focuses on fostering democracy, promoting environmental sustainability, advancing gender equality, and promoting dialog and exchange of knowledge between public policy experts and institutions from Israel and Germany.

Contents

Executive Summary

Israel adopted a unique model to mitigate the chains of infection of the COVID-19 virus using contact tracing technologies (CTT). The two-pronged approach entailed the implementation of mandatory mass-surveillance of mobile phone locations operated by the General Security Service (GSS), and a voluntary, open-source contact tracing application called Ha'Magen. The main difference between the two paths is the degree of privacy invasion. While the GSS surveillance is mandatory in the sense that it invades the privacy of all people who use cellphones in Israel without their consent, the Ha'Magen application is voluntary, since the user has to agree to its terms of use before it is activated, and it is based on principles of privacy-by-design. Since the coinciding technologies encapsulate a contradicting rationale for contact tracing, this study aims to distil privacy perceptions related to each technology and its underlying rationale. Based on a survey conducted in June 2020 among 312 Israelis, we sought to understand:

1. What are the privacy perceptions of the respondents, relating to the GSS surveillance?

2. What are the reasons that led Israelis to not install/uninstall the Ha'Magen Application, and are they related to the overlap with the mass surveillance conducted by the GSS?

3. What parameters may lead to a high level of public endorsement of voluntary monitoring applications, even though mass surveillance renders them redundant?

Since the outbreak of COVID-19 in early 2020, many countries have used CTT as a tool in combatting the pandemic. Surveys about privacy concerns were conducted in the US, Europe, Australia and other countries. We compared our results to some of those surveys.

Our main finding, based on the survey, is that Israelis have not established a clear opinion about GSS mass surveillance. We found a lack of awareness of its existence, mainly among Arabic speaking respondents. Moreover, the majority of respondents were usually indifferent or inconclusive regarding questions concerning the privacy implications of mass surveillance by the GSS. This indifference, again, was more pronounced in the Arabic version. These findings possibly result from the fact that GSS mass surveillance is not visibly present in the daily life of most Israelis, apart from those who receive a text message that notifies them that they have been near a COVID-19 patient and must self-quarantine for 14 days. Until now, public discourse about the subject has primarily been the realm of scholars, technology and legal experts, NGOs and Knesset members. Given the implications of the use of such unprecedented mass surveillance tools, in our opinion, a broad public discourse about mandatory mass surveillance should exist in a democratic country, not just among the above-mentioned professionals.

Regarding voluntary surveillance, we note that the overall indifference towards GSS surveillance is not duplicated in the privacy perceptions of Israelis towards the application Ha'Magen, and our results related to the voluntary measures resemble those reported in other countries vis-à-vis voluntary surveillance. Our findings, which also compare perceptions among Hebrew speaking and Arabic speaking respondents, further indicate that when it comes to voluntary adoption of CTT, one solution cannot fit all. Social groups differ in their motivations to download the application, they consume information regarding the application from divergent sources, and they specify different reasons for using the application.

Although participants are concerned about their privacy, they may lack the necessary knowledge – e.g. about the institutional practices and the organizational operation of the application, and the main technical and legal aspects – to make informed decisions about using the application. According to the knowledge-gap hypothesis, a lack of privacy literacy prevents usage that adequately reflects the user's attitudes.[1] Moreover, lack of privacy information might alienate participants and lead to responses that run the gamut from indifference to negative evaluation.

The category "indifferent" itself calls for close examination. We assume that some of those who responded "indifferent" in the survey would respond differently given greater privacy literacy.

The analysis of our findings results in the following recommendations:

1. **Clarity about intrusion of privacy:** Findings from our study confirm findings from surveys conducted in other countries, which indicate that people would like to be informed about violations of their privacy.

2. **Transparency, accuracy and operation:** Voluntary CTT applications should inform the user of how data is collected and used. To be widely adopted, the applications should not interfere in the day-to-day operation of the smartphone. To gain public trust, voluntary applications must be accurate.

3. **Community-level information channels:** Differences in media exposure across sectors necessitate adopting principles of transparency, openness and involvement in closed communities and networks. Israeli society is highly polarized, divided into numerous sectors in cities and in neighborhoods. It is therefore necessary to create multiple, dedicated, community-level information channels, for example by asking community leaders to encourage their members to adopt voluntary CTT.

4. **Public involvement in decision making:** Communities should be involved in the decision as to which technology will best serves their community, and they should be involved more in choosing the most effective and appropriate channels to disseminate information about the app.

5. **Health and welfare approach:** People need to know that if they are sent into quarantine, they are entitled to health and social support.

6. **Effectivity:** Privacy is not the only issue that should be addressed when explaining the benefits of voluntary CTT. For example, the accuracy of the app should also be communicated. There should be public awareness that voluntary CTTs are effective only when used by a critical mass of the population.

7. **Privacy literacy:** In general, more efforts should be invested in improving public awareness of the right to privacy in Israel.

8. **Data-driven public discourse:** In a democratic country, the re-purposing of tools originally designed for combating terror to addressing a civic health crisis should not be carried out without proper, evidence-based public discourse. While most details about the operation of GSS surveillance are confidential for security reasons, any public debate about its effectiveness and alternatives (or lack thereof) should be backed by transparent data about the system's accuracy and its actual overall success in mitigating the spread of the virus.

9. **Increasing accessibility to complex data:**
To 'democratize' public discourse on mandatory and voluntary CTT, we believe that efforts should be invested in sharing data in levels of complexity that fits the expertise of different audiences, and that is suited for different uses. While experts should have access to raw data as much as possible, there is a striking lack of transparency in the information provided to the general public, and as a result, to the average person. Accessible information and explanation about CTT may increase public participation in the democratic discourse on the topic, and subsequently may increase the adoption rates of voluntary CTT applications.

1. Importance of the Issue and its Relevance to Current Policymaking

The novel Coronavirus disease 2019 (COVID-19) caught the world by surprise. On January 30, 2020, the World Health Organization (WHO) declared the emergence of COVID-19 as a "Public Health Emergency of International Concern (PHEIC)."[2] This declaration was short-lived. Only a few weeks later, on March 11, 2020, the WHO declared COVID-19 a pandemic.[3]

The pandemic caught Israeli democracy in a precarious state, after three rounds of elections. No clear resolution followed the elections, and the pandemic forced the politicians to establish a new, inflated, and unstable coalition government. In addition, the Israeli Prime Minister is under indictment on criminal charges. At the same time, the status of the judiciary is being eroded and public trust in the courts is decreasing.[4] We can assume that this situation influenced the public's privacy perceptions and trust in the measure implemented by the government to address the crisis.

To address the vast spread of the new virus, most countries used various technologies designed to interrupt the chain of infection, a technique that is also known as "contact tracing technology" (CTT). CTT involves the use of location-tracking applications or other surveillance technology to trace people who have been in contact with individuals who were diagnosed with COVID-19 in order to isolate them and thereby prevent further potential spread of the virus.[5] In most democratic countries, the use of such tracing techniques has sparked debates about the ability of democratic countries to trace their residents without violation of human rights such as the right to privacy, the right to equality and freedom of movement.

In most liberal democracies, such as France and Canada, the use of contact tracing technologies is voluntary. In this regard, Israel's technological response to COVID-19 was different, as it combined both voluntary and involuntary measures. On March 22, 2020,[6] Israel rolled out a voluntary contact tracing application – "Ha'Magen" ("The Shield" in Hebrew), which performed contact tracing through GPS.[7] At the same time, the country used its State of Emergency regulations (followed by special legislation) to authorize the General Security Services (GSS) to repurpose routine tools used to combat terrorism, for contact tracing of the entire population.[8]

Authorizing mass surveillance of innocent civilians for epidemiological reasons by means that were originally used to combat terrorism, it goes without

saying, is problematic in terms of human rights. It severely compromises the right to privacy[9] and has far-reaching implications for freedom of movement and the right to equality of those who have been ordered to self-quarantine based on the indications of this tool. When combating terrorism, the government must sometimes invade privacy in order to guard other human rights such as the right to defend the lives of civilians. The concern is – as in the case of the United States after 9/11[10] – that the use of such means by the state could be exploited after the threat has passed. Without proper oversight, these means might be used to harm specific groups such as political rivals, media sources and so on. Stated otherwise, the application of anti-terrorism technologies for contact tracing might result in a slippery slope leading to an irreversible erosion of human rights, thereby posing a real threat to the state's democratic foundations. Previous research has already pointed to the ties between the invasion of privacy and violation of human rights.[11] Correspondingly, the main controversy in Israel regarding the authorization of the GSS to use its anti-terrorism surveillance technology to perform involuntary contact tracing on the whole population, centers on the balance between the effectiveness of surveillance and the violation of freedoms, and in particular the violation of the right to privacy.

As of May 2020, the voluntary technology – the Ha'Magen application – had not been widely used by the Israeli public. This lack of adoption may be attributed to numerous causes, including the government's lack of promotion of the application, wide population groups who do not use smartphones, technical barriers in the app's operation, inability to sufficiently justify the app's 'decisions' due to privacy concerns, a concern that inaccurate results might sow panic or trigger complacency, fear of the app's vulnerability to

hacking, etc.[12] In Israel, there were also cases of erroneous self-isolation notifications and contradicting instructions, as well as various technical issues. Other complaints included privacy concerns, political views and objections to the pro-app campaign whose slogan – "download if you want your routine back" – was perceived by some as sending the wrong message.[13] Therefore, the consistent opinion of Israeli regulators was that there is no real alternative to GSS surveillance.

> **Due to the parallel and overlapping use of both GSS surveillance and the Ha'Magen application in Israel, surveys of public perceptions of CTT in Israel have hitherto lumped together the two types of voluntary and involuntary surveillance.**

Due to the parallel and overlapping use of both GSS surveillance and the Ha'Magen application in Israel, surveys of public perceptions of CTT in Israel have hitherto lumped together the two types of voluntary and involuntary surveillance. However, without making a clear distinction between the two, the concern is that the Israeli voluntary application will not achieve the minimum number of downloads necessary to be effective, even if it conforms to the principles of privacy-by-design, and therefore the application is doomed to failure. The purpose of this study is to propose a way to promote civic engagement in all that pertains to the employment of surveillance technology.

Since the coinciding technologies encapsulate a contradicting rationale for contact tracing, this research aims to distil privacy perceptions related to each technology and its underlying rationale. Based on a survey conducted in June 2020 among 312 Israelis, we seek to understand:

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1. What are the privacy perceptions of the respondents, relating to the GSS surveillance?

2. What are the reasons that led Israelis to not install/uninstall the application Ha'Magen, and are they related to the overlap with the mass surveillance conducted by the GSS?

3. What parameters may lead to a high level of public endorsement of voluntary monitoring applications, even though mass surveillance renders them redundant?

2. Literature Review and Background

The use of CTT to detect paths of infection of the COVID-19 virus has sparked controversies around the world.[14] The main controversy in most of the discussions revolved around the question of the balance between the effectiveness of surveillance to locate contacts and stop the spread of the epidemic and the violation of individual liberties (especially the right to privacy).

> **The Israeli debate focused on the question of whether the use of the GSS surveillance is necessary at all, and if so, whether or not it is the only means that should be used.**

Previous research discussing the privacy aspect of CTT has been based mostly on public perceptions of voluntary CTT applications.[15] However, the Israeli debate focused on the question of whether the use of the GSS surveillance is necessary at all, and if so, whether or not it is the only means that should be used.

Within the Israeli context, some previous studies have mapped the technological alternatives to GSS surveillance.[16] Other discussed the legal and social

ramifications of CTT. Birnhack and Zar presumed that CTT can help eradicate epidemics.[17] They mapped all existing privacy aspects of CTT, including medical information, location and social ties between people, and suggested several guidelines for the adoption of these technologies, based on the different interests of the relevant actors, their duties and rights, while taking into account variant levels of public trust, social solidarity and digital skills across different populations. In their opinion, personal information of all types should be protected from all entities that might threaten privacy, including the state and private corporations. In addition, public trust and social solidarity should be maintained. To achieve this goal, so they argue, no data should be transferred to the state without the expressed consent of the users; cross-reference of information between applications or databases should be avoided; transfer or use of the information for purposes other than intended in the original collection should be forbidden; data collection should be allowed using only open-source software; etc.[18]

Shwartz Altshuler and Aridor-Hershkovitz mapped CTT applications around the world, including in China, Taiwan, South Korea, France, Australia, New Zealand, Italy, Germany and the UK, among others.[19] The authors believed that an intermediate path should be chosen in which a combined approach to state surveillance whereby it is integrated with voluntary software surveillance. In that way, the technological possibility of defeating the pandemic would not be abandoned, and state surveillance could be used to the minimum required.[20]

Cahane and Shany recommended increasing the transparency of GSS practices for obtaining communications data from telecom providers, as well as augmenting judicial and parliamentary review of the process.[21]

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As for privacy perceptions concerning private companies or governments that collect personal data, as well as privacy concerns regarding CTT – we found several surveys conducted in the US, Australia and Europe. In May 2020, the Pew Research Center published a survey about Americans' perceptions of digital privacy conducted in 2019, alongside the results of a follow-up survey administered during the COVID-19 pandemic (hereinafter "Pew survey"). According to the former, 79% of Americans were to some extent concerned about how private companies were using their personal data. Sixty-four percent of the respondents were concerned about government collection of personal data.[22] In another survey, conducted in the UK, US, European countries and seven other countries (hereinafter "The worldwide survey"), the findings were different. More than 50% of the participants indicated that they would be most comfortable if a known application such as Google Maps were to be used to track their location data in order to help mitigate the pandemic. The reasons included: general reputation or public image, good record with privacy, the company's perceived ability to effectively help slow the spread of the pandemic, and the fact that location data was in any case already being collected by the application.[23] In contrast, privacy concerns were shown to negatively affect one's willingness to download CTT applications. The conclusion is that lack of trust in new CTT applications is an obstacle to public cooperation in voluntary surveillance. This was reflected in the responses of the 61% who declared they were somewhat comfortable with Google's location tracking but did not "trust their government would use its citizens' location conservatively," as well as more than 50% who were uncomfortable with the idea of the state aggregating location information using credit cards data or surveillance cameras.[24]

In Australia, the results were even more conclusive. The federal government in Australia developed an opt-in application, "TraceTogether," to help stop the spread of COVID-19. Fifty-seven percent declared they would be uncomfortable if the government would be able to follow them. Just 38% responded that they are willing to download the application to their cellphones, while 33% indicated reluctance to do so. The rest were neutral. Sixty-three percent were concerned about the safety of their personal data should they install the application. Only 35% agreed that they trust the government not to misuse any data that might be collected by the application, 36% were concerned and the rest neutral.[25]

In surveys conducted in the US, responses differed depending on the entity that stands behind a CTT. Americans were willing to install CTT if it was produced by public health agency or by their health insurance provider, less willing to do so if a federal or local government were the provider, and even less willing to install CTT if the provider was a technology company or public university (11%). The lowest degree of trust was in a scenario where an international body like the UN or the WHO (9%) were to provide the app.[26]

The studies also exposed differences in privacy conceptions between the countries. A survey conducted in France, Germany, Italy, the UK and the US with 5,995 participants found that 74.8% say they would probably or definitely download the contact tracing application if it were available, and in the case of automatic installation, where the user can "opt out" and remove the app if they wish, 67.7% indicated that they would keep it installed. However, there was a difference between the countries: German and American respondents were more resistant to the installation of the application compared to the other countries.

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The difference was due to general approaches to privacy, concerns about application security and concerns particular to government surveillance.[27]

Other surveys also suggest possible factors that could raise public trust in CTT. In one of the surveys, the most cited arguments in favor of installing a CTT application included a desire to protect family and friends, and a hope that the application could help limit the pandemic. In other words, the main reason was the potential benefits of the application for safeguarding health and being informed about the risk.[28]

As for behavioral changes due to COVID-19, in May 2020 a Gallup survey showed that 74% Americans said they had avoided small gatherings in the past week, down by about 10% than the previous month.[29] However, the difference between avoidance rates among Republicans (60%) and Democrats (86%) was stark. In addition, three other surveys in the US with nearly 1,000 participants, "consistently showed evidence that motivated political (and not experiential) reasons more strongly underlie conservatives' lack of concern for COVID-19."[30] In the worldwide survey, most of the respondents declared they were less frequently leaving their home due to COVID-19.[31]

Many surveys, as shown above, have been conducted about privacy perceptions pertaining to CTT and about behavioral changes due to COVID-19. We shall now turn to our survey.

3. Method

Our study is based on a survey conducted in June 2020. The survey included demographic questions, questions about general perceptions of privacy and specific questions about privacy perceptions during COVID-19, including the GSS surveillance and the Ha'Magen application. The survey was administered in both a Hebrew and an Arabic version. Respondents were recruited through snowball sampling and through calls posted on various social media and online forums. The Hebrew version received 250 responses and the Arabic version, 62. In total, 312 participants answered the survey.

The survey was designed to examine the general public's level of awareness of GSS surveillance, to evaluate the public's awareness of the existence of Ha'Magen (the voluntary application), and to examine attitudes regarding the right to privacy in light of the need for CTT in Israel.

The survey was designed to examine the general public's level of awareness of GSS surveillance, to evaluate the public's awareness of the existence of Ha'Magen (the voluntary application), and to examine attitudes regarding the right to privacy in light of the need for CTT in Israel. Eligible survey participants included anyone who was in Israel during the first lockdown period (March-May 2020). The research was conducted using Google's survey platform and certified by the Tel-Aviv University's Institutional Review Board.

Attitudes about the adoption of technology are traditionally measured using questions that are similar to consumer behavior surveys. However, since what is being measured is not a commercial application for personal use but a national application for public health, broader social aspects were examined, such as recognition of the needs the application was designed to address, and expectations of the participants.

Most question items in the survey were developed by our team; others follow questions featured

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in surveys carried out by privacy researchers, policy institutes and the media, e.g. Gallup, CNN, and Pew, as well as public opinion surveys published in the midst of the Coronavirus crisis[32] and studies conducted prior to the pandemic that examined privacy perceptions, trust in government and technology acceptance. [33]

4. Analysis

4.1. Descriptive Statistics - Demographics and General Background

The Hebrew-language survey received 250 responses in total and the Arabic survey received 62 responses in total. The age distribution of respondents to the Hebrew version was 16-79, and for the Arabic version, 15-61. More women responded to the surveys than men (Hebrew version 59.7%, Arabic version 79.7%).

The majority of respondents held a first, second, or third-degree (Hebrew version 81.3%, Arabic version 71.1%) and some had only a high school education (Hebrew version 6%, Arabic version 23.3%). Most of the respondents worked as salaried employees (Hebrew version 77.1%, Arabic version 65.5%) and some were self-employed (Hebrew version 16.3%, Arabic version 17.2%). The others either did not work, worked as both salaried employees and self-employed, or were retired. Most of the respondents declared that they experienced no change in their employment status during the first lockdown (Hebrew version 64.3%, Arabic version 61%). However, a large portion, more than 25% (in both the Hebrew and Arabic versions) were either fired, suffered from a salary cut, or were furloughed. Of the respondents to the Arabic version, 83.8% defined themselves as Muslims, 1.7% Christians, 3.3% Druze and 11.7%

as Arabs. Religious identity in the Hebrew version was divided according to 74.6% secular, 16.5% traditional, 4.4% religious and 1.7% Orthodox. In the Arabic version, we had the division of 20% non-religious, 41.7% traditional and 36.7% religious. As for political opinion, responses were skewed in favor of the left-central wing in both of the versions. In the Arabic version, 49.1% preferred not to state their political view.

> **Although respondents to both versions of the survey expressed awareness of the perils of data collection in the digital era, several differences emerged in general privacy attitudes between the Arabic and the Hebrew versions.**

To understand specific attitudes towards voluntary and involuntary CTT as a measure to fight the pandemic in Israel, the survey first measured general attitudes towards privacy, as well as the extent to which respondents have been personally affected by COVID-19. These findings, which shed light on specific attitudes towards CTT, indicate initial differences in attitudes between respondents to the Hebrew version and those to the Arabic versions.

4.2. General Privacy Attitudes

Although respondents to both versions of the survey expressed awareness of the perils of data collection in the digital era, several differences emerged in general privacy attitudes between the Arabic and the Hebrew versions. Respondents to the Hebrew version were more aware of the possible violation of privacy by mobile phone applications, and claimed to be more active in protecting their data – for example by not surfing certain websites or not installing applications that

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might collect personal information. In contrast, respondents to the Arabic version were more willing to use applications or websites that might violate their privacy (see Figures 1.1. and 1.2). Both groups expressed similar levels of concern

about privacy violations by the state, compared to privacy violation by corporate actors.

Figure 1.1.

General Perceptions About Privacy in the Digital Environment

Hebrew Version

Statement	1	2	3	4	5
Applications that require access to location are safe to use	75	67	68	26	14
I am worried about the state's surveillance	24	45	68	26	14
I am worried about the state using the information it collected	34	45	37	59	75
It bothers me that companies are collecting private information about me	9	33	35	74	99
I'm currently worried about a violation of my privacy by the state	26	36	43	59	86
I am worried about my privacy while surfing the internet	13	46	54	66	71
In the current era of applications and technology, there is no more privacy	5	16	35	82	112
It has already happened that I decided not to download an application that might collect personal information about me	15	10	22	53	150
It has already happened that I have decided not to enter a website that may collect personal information about me	15	19	20	59	137
When I authorize an application to access my data on the phone, I know that it will not be transferred to anyone other than the operator of the app	128	57	39	19	7

■ 1 - Strongly Disagree   ■ 2   ■ 3   ■ 4   ■ 5 - Strongly Agree

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Figure 1.2.

General Perceptions About Privacy in the Digital Environment **Arabic Version**

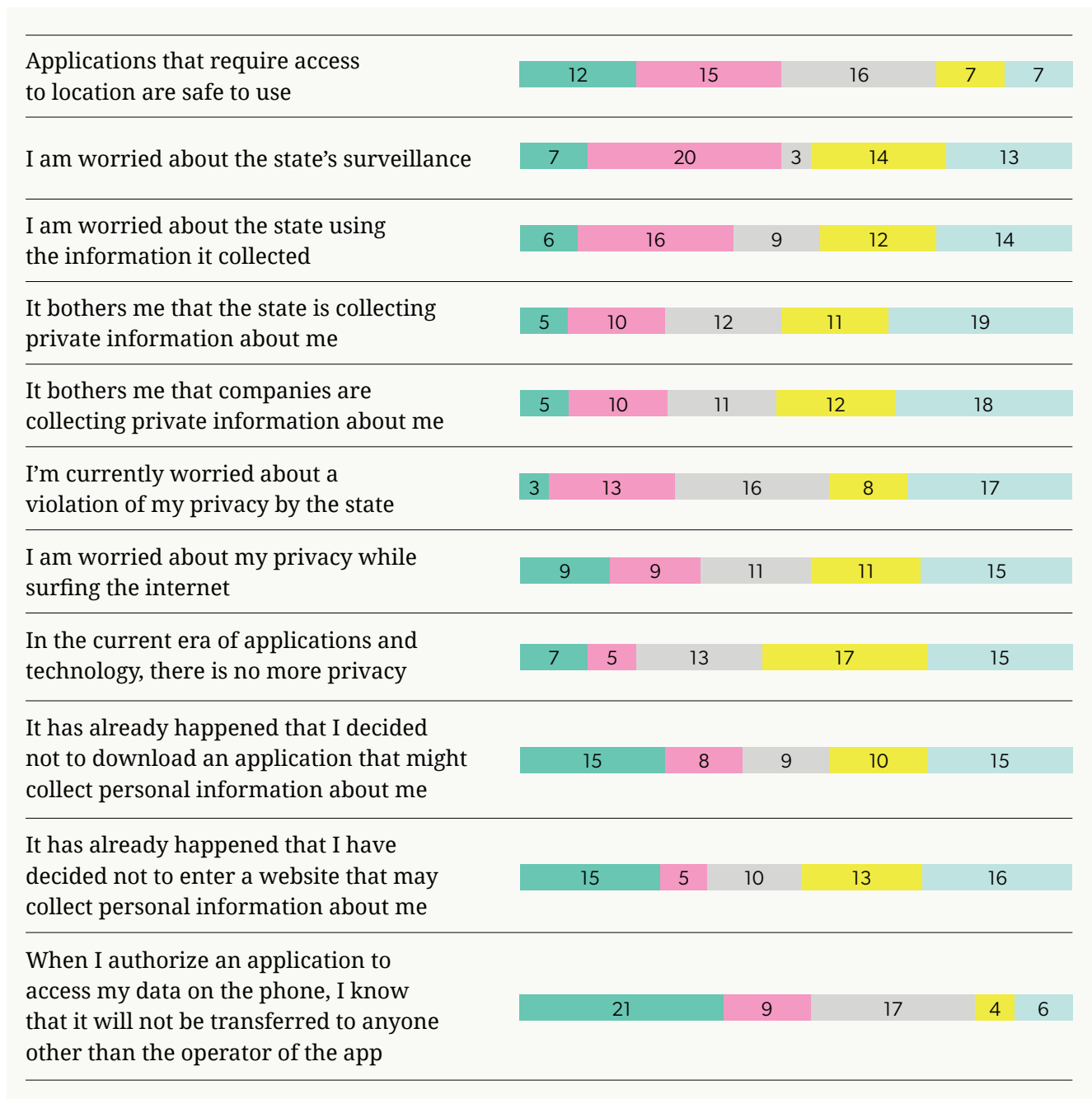| Statement	1 - Strongly Disagree	2	3	4	5 - Strongly Agree
Applications that require access to location are safe to use	12	15	16	7	7
I am worried about the state's surveillance	7	20	3	14	13
I am worried about the state using the information it collected	6	16	9	12	14
It bothers me that the state is collecting private information about me	5	10	12	11	19
It bothers me that companies are collecting private information about me	5	10	11	12	18
I'm currently worried about a violation of my privacy by the state	3	13	16	8	17
I am worried about my privacy while surfing the internet	9	9	11	11	15
In the current era of applications and technology, there is no more privacy	7	5	13	17	15
It has already happened that I decided not to download an application that might collect personal information about me	15	8	9	10	15
It has already happened that I have decided not to enter a website that may collect personal information about me	15	5	10	13	16
When I authorize an application to access my data on the phone, I know that it will not be transferred to anyone other than the operator of the app	21	9	17	4	6

■ 1 - Strongly Disagree   ■ 2   ■ 3   ■ 4   ■ 5 - Strongly Agree

4.3. Opinions and COVID-19 Influence

Just about 10% in both versions declared that there was someone in their family that was medically affected by COVID-19. Eighty-eight percent of respondents to the Arabic version and 85.3% of respondents to the Hebrew version declared that they wear a mask when they leave the house. About two-thirds of the respondents in both versions reported that they avoid closed public places in contrast to about 16% that avoid open public places.

In the Hebrew version, 59% reported that they avoid public transportation, compared to 49% in the Arabic version. The essential difference in behavior was when it came to avoiding small gatherings: In the Arabic version, only 16.9% reported that they abstained, compared to 40% in the Hebrew version.

4.4. Opinions About Privacy and Awareness of the GSS Surveillance

The answers in both groups showed lack of awareness about how data is collected and used by the GSS, and if the tracing methods really helped in fighting the pandemic. As for the trust of the GSS surveillance, both groups tended not to agree that there is a real need for surveillance either by the GSS or by private companies. However, to the suggestion that another state authority will replace the GSS in this role – the respondents were more divided in their opinions: it was not favored by a clear majority in the Hebrew version, and in the Arabic version, most were indifferent to this claim or did not agree (Figures 2.1. and 2.2).

Figure 2.1.

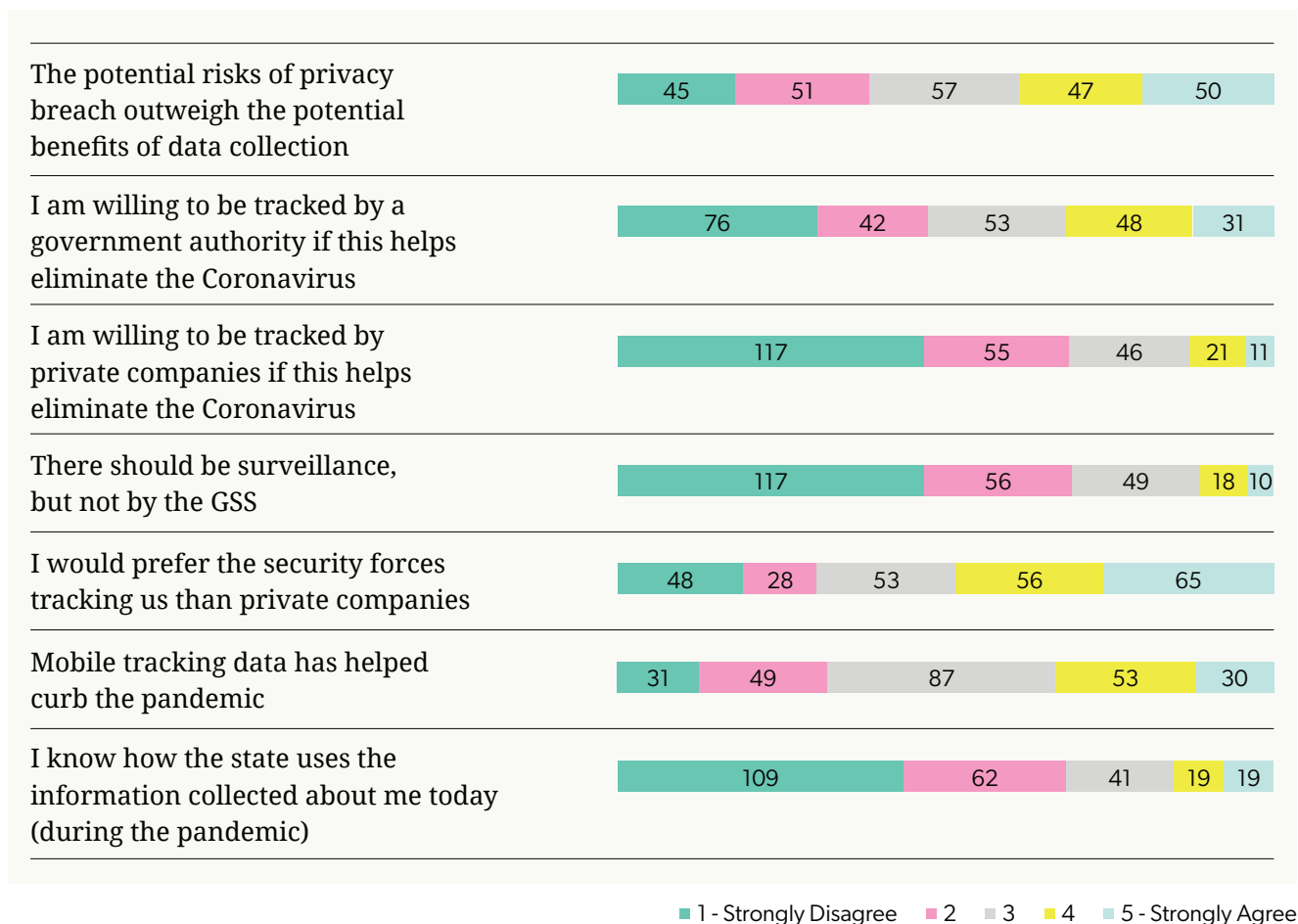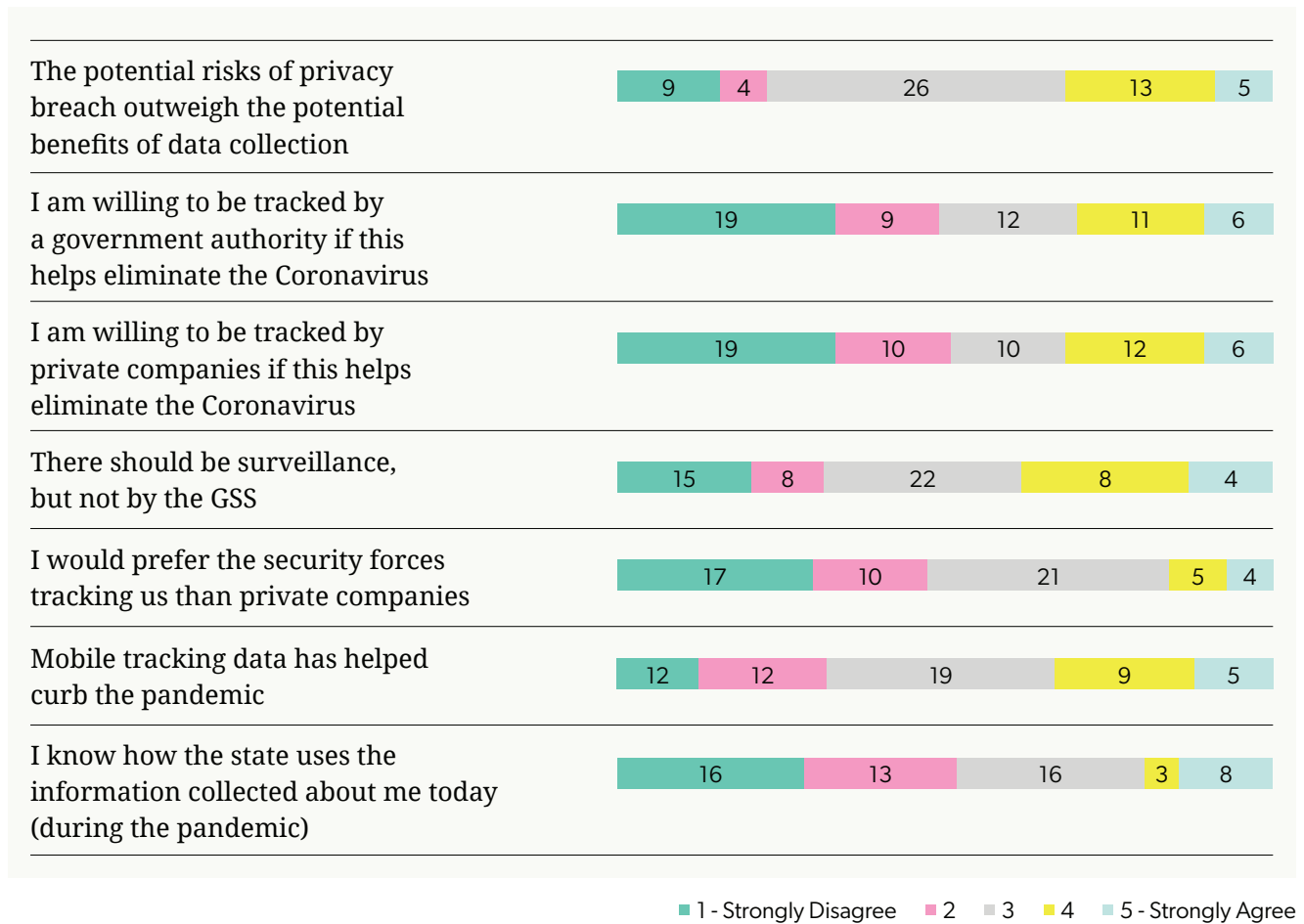Perceptions About Privacy Pertaining to COVID-19   **Hebrew Version**

	1 - Strongly Disagree	2	3	4	5 - Strongly Agree
The potential risks of privacy breach outweigh the potential benefits of data collection	45	51	57	47	50
I am willing to be tracked by a government authority if this helps eliminate the Coronavirus	76	42	53	48	31
I am willing to be tracked by private companies if this helps eliminate the Coronavirus	117	55	46	21	11
There should be surveillance, but not by the GSS	117	56	49	18	10
I would prefer the security forces tracking us than private companies	48	28	53	56	65
Mobile tracking data has helped curb the pandemic	31	49	87	53	30
I know how the state uses the information collected about me today (during the pandemic)	109	62	41	19	19

■ 1 - Strongly Disagree ■ 2 ■ 3 ■ 4 ■ 5 - Strongly Agree

Figure 2.2.

Perceptions About Privacy Pertaining to COVID-19   **Arabic Version**

The potential risks of privacy breach outweigh the potential benefits of data collection	9 / 4 / 26 / 13 / 5
I am willing to be tracked by a government authority if this helps eliminate the Coronavirus	19 / 9 / 12 / 11 / 6
I am willing to be tracked by private companies if this helps eliminate the Coronavirus	19 / 10 / 10 / 12 / 6
There should be surveillance, but not by the GSS	15 / 8 / 22 / 8 / 4
I would prefer the security forces tracking us than private companies	17 / 10 / 21 / 5 / 4
Mobile tracking data has helped curb the pandemic	12 / 12 / 19 / 9 / 5
I know how the state uses the information collected about me today (during the pandemic)	16 / 13 / 16 / 3 / 8

■ 1 - Strongly Disagree   ■ 2   ■ 3   ■ 4   ■ 5 - Strongly Agree

The differences in general privacy perceptions between respondents to the two versions of the survey are also apparent in terms of awareness of the GSS surveillance. While over 90% of the respondents in the Hebrew version indicated that they were aware that the GSS is tracking the cellular location of the entire population as a measure to fight the spread of the virus, only 60% of the respondents to the Arabic version shared this awareness (see Figure 3). Both groups also showed lack of awareness or lack of information about what is done with the data that the GSS collected or if the tracing methods have really helped so far in fighting the pandemic. As for

the trust of the GSS surveillance, both groups tended not to agree that there is a real need for surveillance either by the GSS or by private companies. However, as for the suggestion that another state authority replace the GSS, the respondents were more divided in their opinions with no clear majority in the Hebrew version relative to the Arabic version where respondents were indifferent to this claim or did not agree.

Nevertheless, respondents to both versions showed similar levels of awareness of the Ha'Magen app (82.4% and 78.3% in the Hebrew and Arabic versions, respectively) (see Figure 4).

Figure 3.

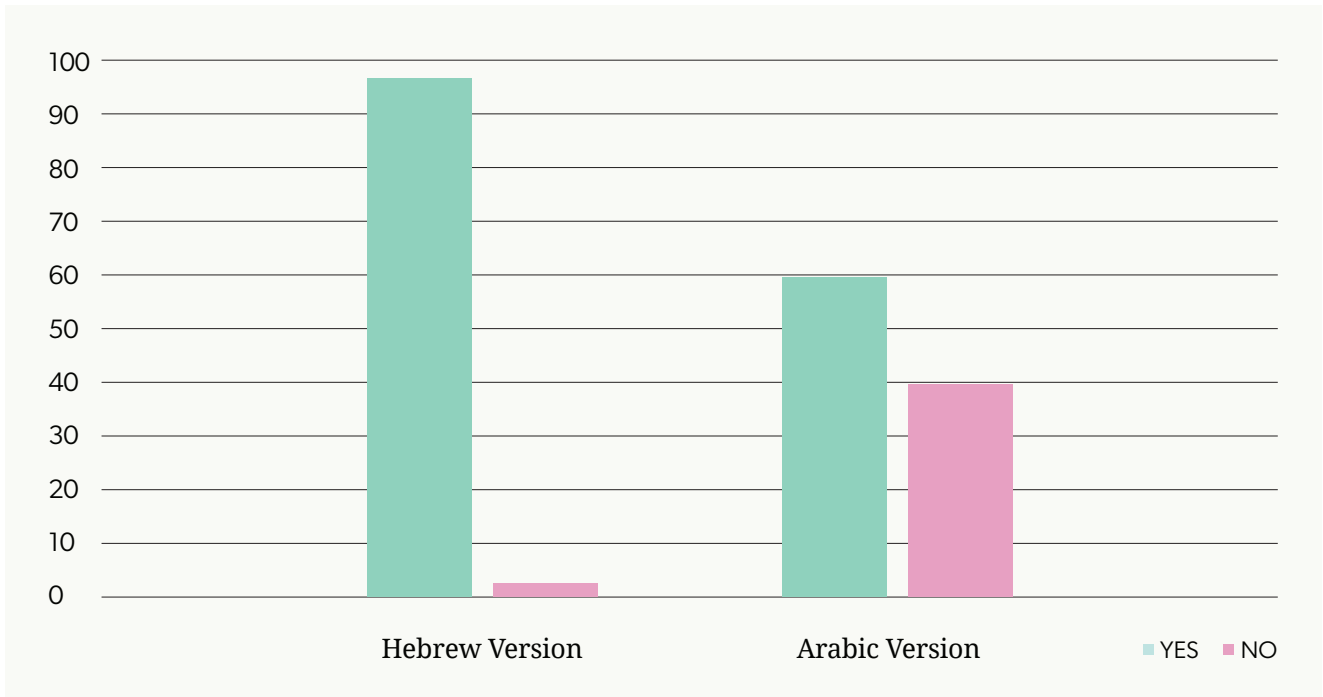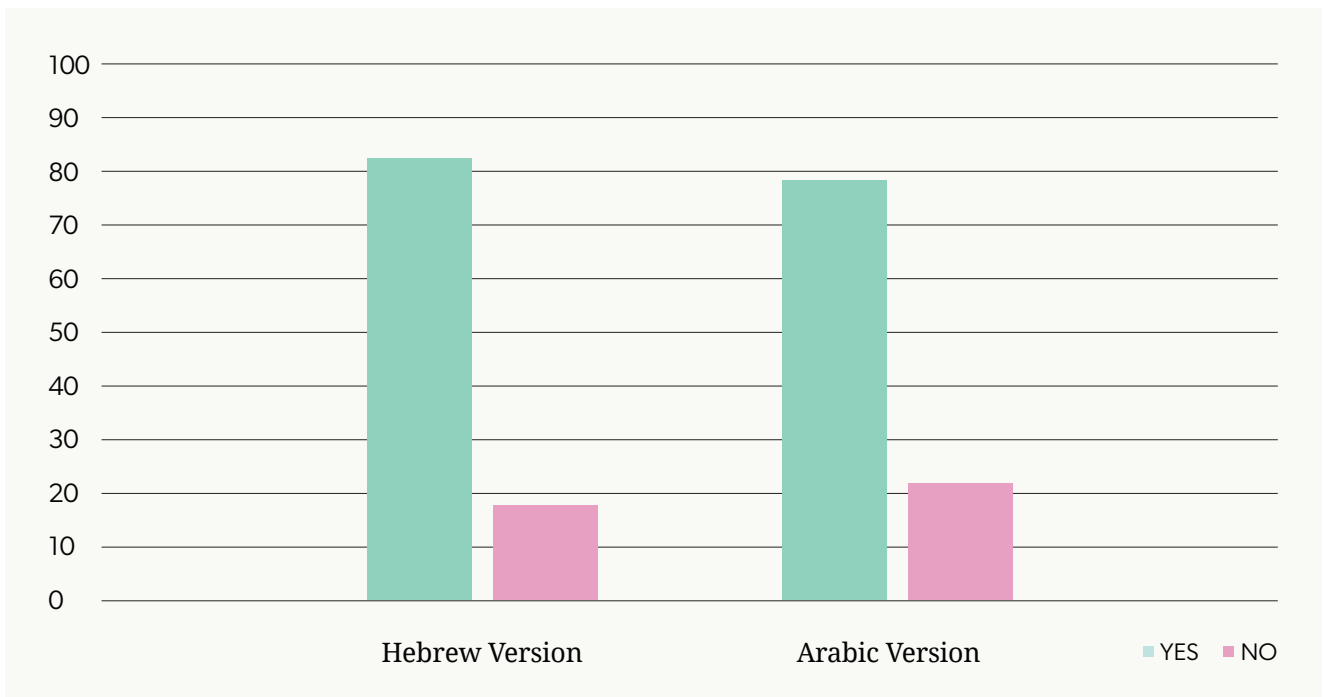## Were You Aware of the GSS's Cellular Tracking to Locate Potential New Cases?


Figure 4.

Were You Aware of the Ha'Magen Application?

These differences are partially explained by the fact that respondents to each version tend to receive their information from different sources. With regards to the Ha'Magen app, the largest group of respondents to the Hebrew version (46.6%) heard about the application through the mass media (TV and radio), compared to 7.8%

of respondents to the Arabic version. However, a sizeable percentage of respondents to both versions were equally informed about the app from friends or through the workspace, and from the official website of the Ministry of Health (see Figure 5).

Figure 5.

Information Sources About Ha'Magen App
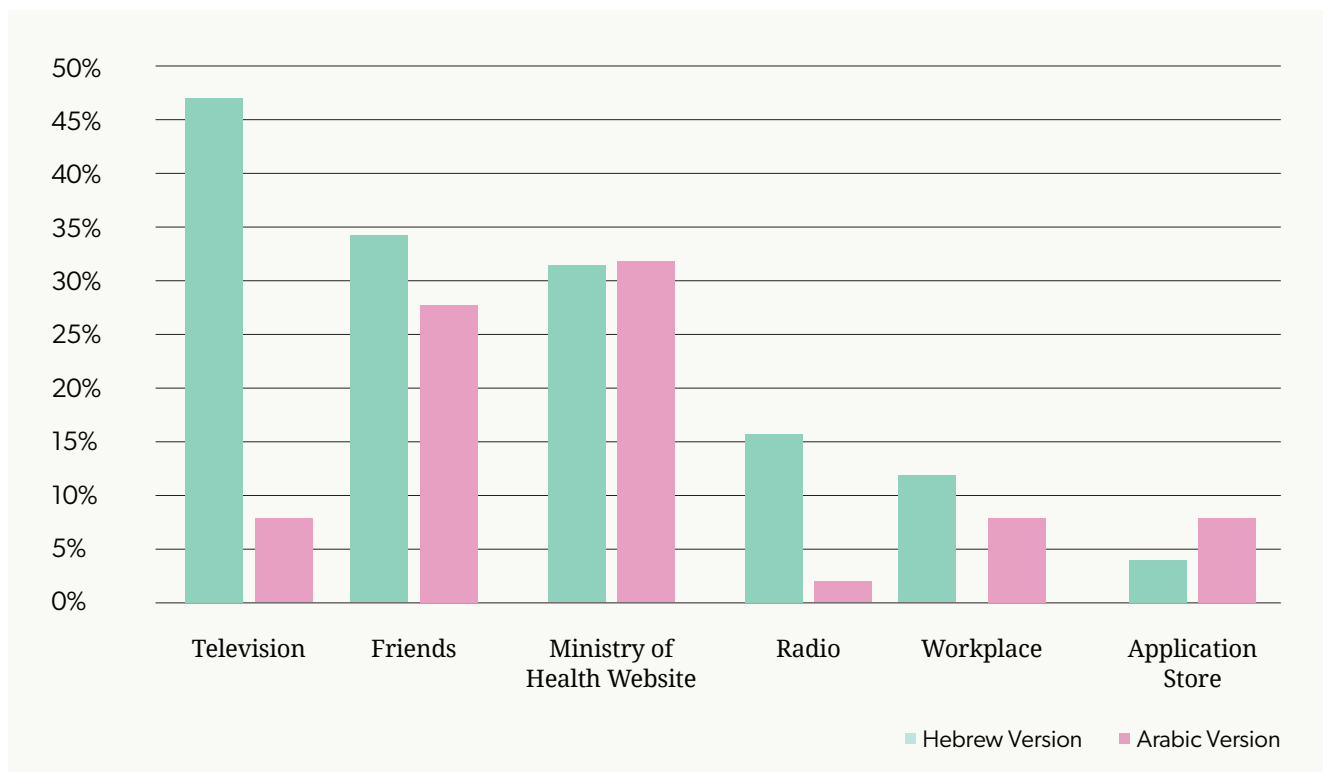
We note a higher uptake rate of the Ha'Magen application among respondents to the Arabic version (35% compared to 45% in the Hebrew version). While the majority of respondents in both groups indicated that they downloaded the application because it informed them if they were unknowingly near a Corona patient, privacy concerns were a greater motivation for respondents to the Hebrew version compared to the Arabic version (11.7% vs. 5.7% respectively). The role of information sources stands out as a motivation for downloading the application.

While 10.6% of the respondents to the Hebrew version indicated that they downloaded the application after being informed by the mass media, none of the respondents to the Arabic version did so. Instead, respondents to the Arabic version indicated that the secondary motivations for downloading the application were recommendation by friends (8.6%) or curiosity (8.6%). This corresponds with 10.6% for downloading based on a recommendation and 1.1% based on curiosity among respondents to the Hebrew version (See Figure 6).

Figure 6.

Reasons for Installing the Ha'Magen Application
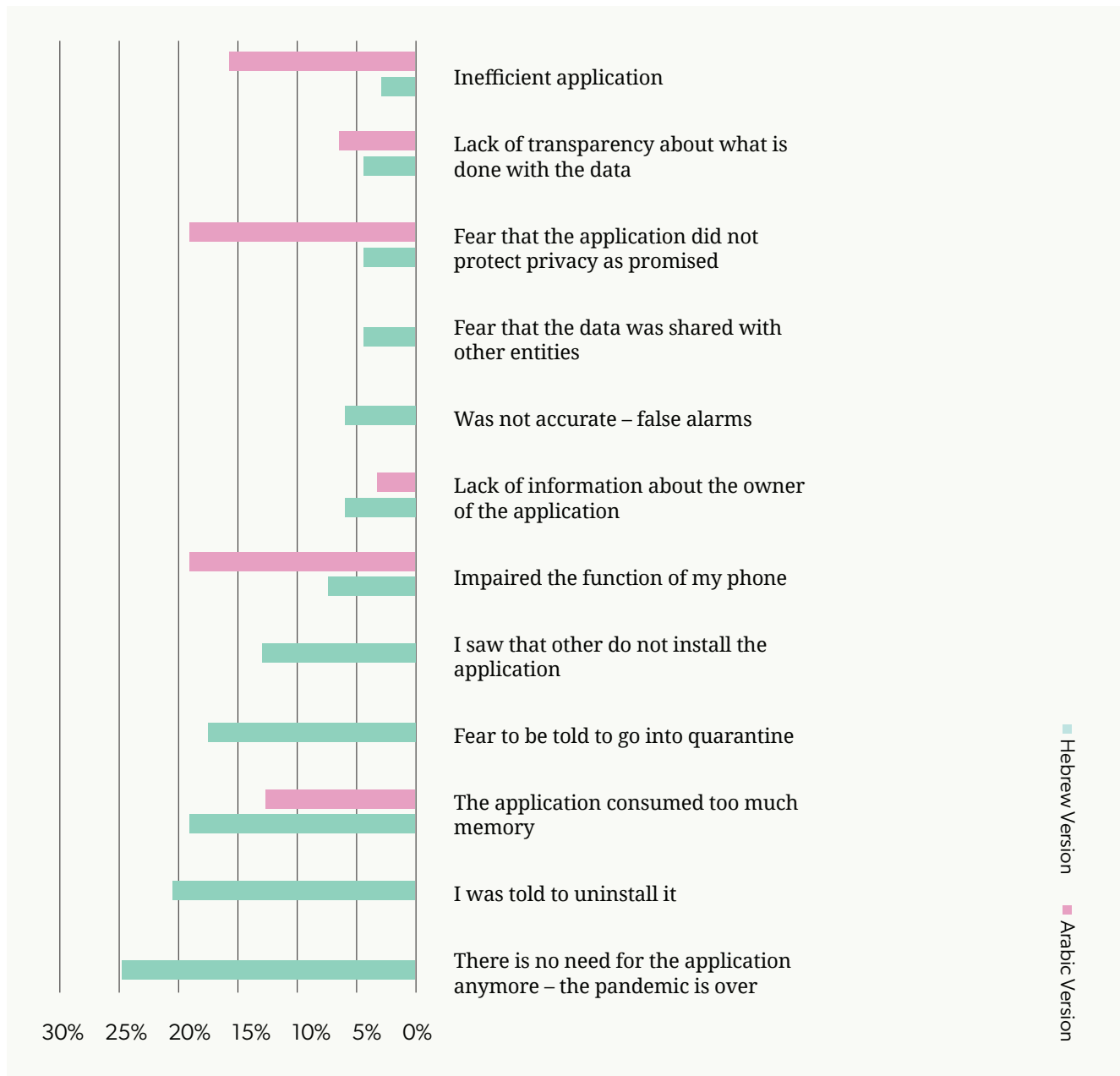

Hebrew Version **Arabic Version**
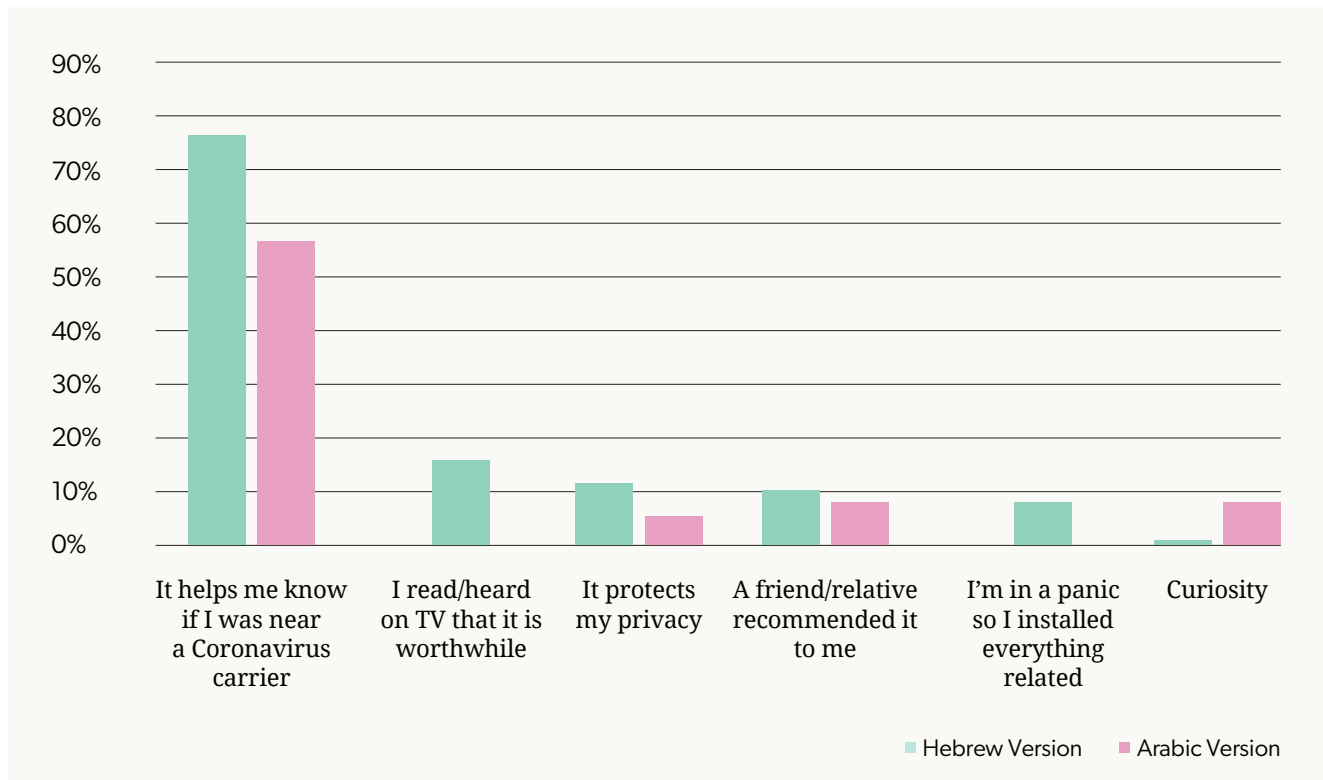
Looking at the reverse behavior, respondents refrained from downloading the application mainly due to privacy concerns – the wish not to be followed, lack of transparency about use of the data gathered and the perception that the costs of invasion of privacy are too high. Other reasons for not downloading the voluntary CTT application included the application's battery drain, false alarms, lack of accuracy or credibility, not owning a smartphone, and the perception that there is no real need for the application.

Most of the respondents declared they were indifferent or did not agree with the claim that the application is accurate. Only 30% in the Hebrew survey and only 21.3% in the Arabic survey declared they still had the application installed on their cellphones. Here, too, there were differences between the Arabic and the Hebrew surveys as to the reasons to uninstall the application: In the Arabic survey, the main reasons were that the application used too much of the available memory space on their phones (19.4%) and a lack of information about the application's owner (19.4%). In contrast, the main reasons for uninstalling the application among respondents to the Hebrew survey were fear of privacy violations (36.7%) and lack of transparency about how collected data was being used (20.6%) (see Figure 7).

Figure 7.

Reasons for Uninstalling the Ha'Magen Application

Inefficient application

Lack of transparency about what is done with the data

Fear that the application did not protect privacy as promised

Fear that the data was shared with other entities

Was not accurate – false alarms

Lack of information about the owner of the application

Impaired the function of my phone

I saw that other do not install the application

Fear to be told to go into quarantine

The application consumed too much memory

I was told to uninstall it

There is no need for the application anymore – the pandemic is over

30% 25% 20% 15% 10% 5% 0%

Hebrew Version

Arabic Version

As for the reasons that lead people to consider re-installing the application – again, respondents to the Hebrew version of the survey showed more concern about privacy protection, accuracy and efficiency. Solidarity and transparency about the way the application works accounted for about 20% of the answers. Moreover, 20% agreed with the principle that if the application instructed a user to self-quarantine, the government should take care of their income, medical concerns, social care and food supply. The latter gained just 2% support among respondents to the Arabic version, and there was no clear answer in this group as to what would persuade respondents to reinstall the application (See Table 1).

Table 1.

Reasons for Re-Installing Ha'Magen Application

Technology	Hebrew version	Arabic version
Knowing that the state encourages the use of the application	10%	6.1%
Knowing that the application is state-owned, not a private company	18.8%	12.2%
Knowing that the application maintains my privacy	54.4%	18.4%
Knowing that the application does not transmit information to the government	29.6%	10.2%
Knowing that the GSS do not follow me using the application	23.6%	2%
Knowing that if you download the others will do the same (solidarity)	22%	2%
Knowing that no one will force me to present the application data	19.6%	8.2%
Knowing that the success of the application depends on the numbers of downloads	27.6%	6.1%
Knowing that my friends are also using the application	16%	12.2%
Knowing that I can quickly appeal the application report	25.2%	2%
Knowing that the application is accurate and will not have false alarms	45.2%	12.2%
Knowing that if I must go into isolation based on the application, the state will take care of me: Social assistance	18%	2%
Knowing that if I must go into isolation based on reporting the application, the state will take care of me: Income assistance	20.8%	2%
Knowing that if I must go into isolation based on reporting the application, the state will take care of me: Medical assistance	21.2%	2%
Knowing that if I must go into isolation based on reporting the application, the state will take care of me: Food supply	16%	2%

As for perceptions about the identity of the entity conducting the contact tracing, our findings suggest that both groups did not show more faith in tracing applications run by private entities than by the GSS. However, they believed that alternatives to GSS surveillance should be considered. Also, respondents in both groups declared the need for transparency about the effectiveness of both the Ha'Magen app and GSS surveillance. Respondents to the Hebrew version were less afraid of GSS surveillance than respondents to the Arabic version. The indifference of the Arabic speaking sector is noted across answers to the survey (see Figures 8.1. and 8.2).

Figures 8.1.

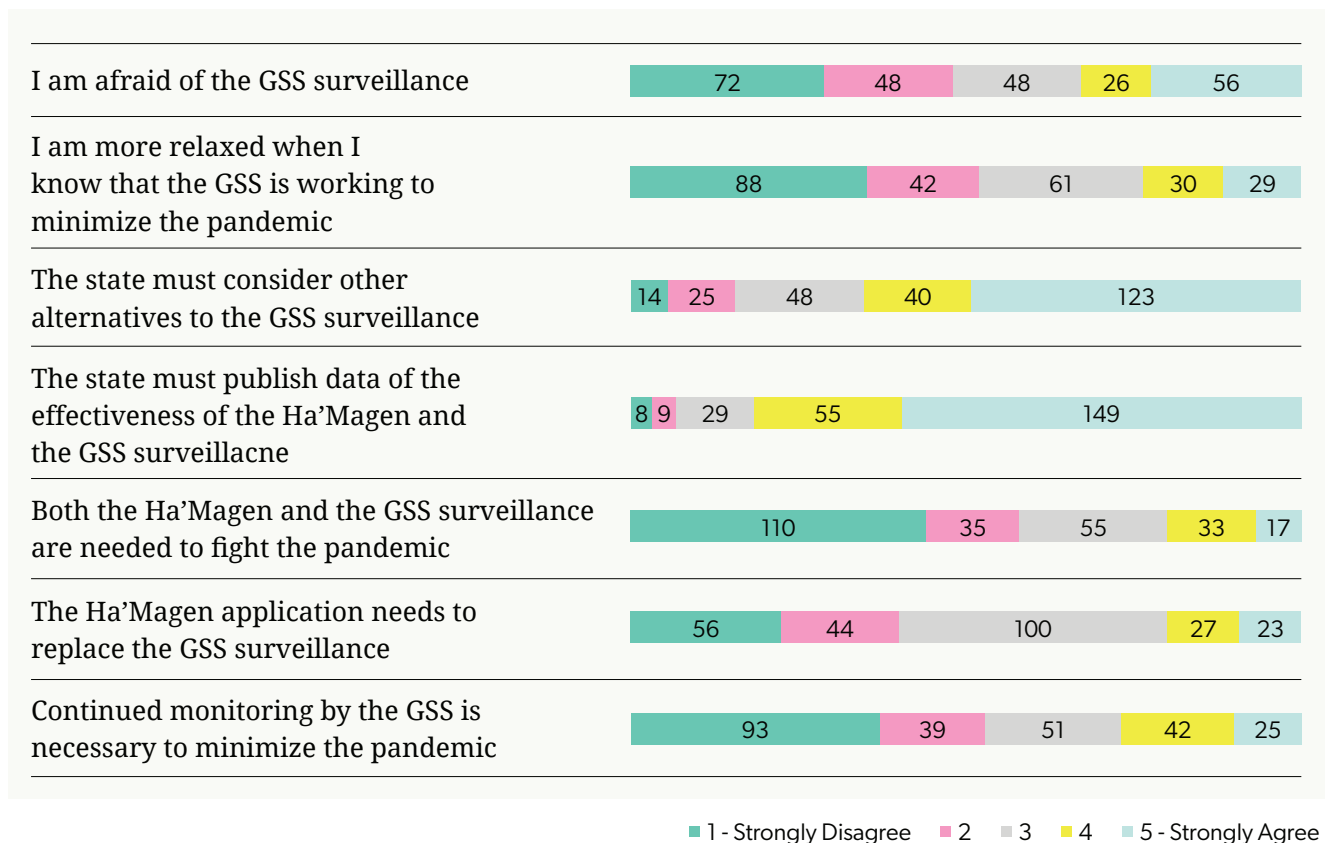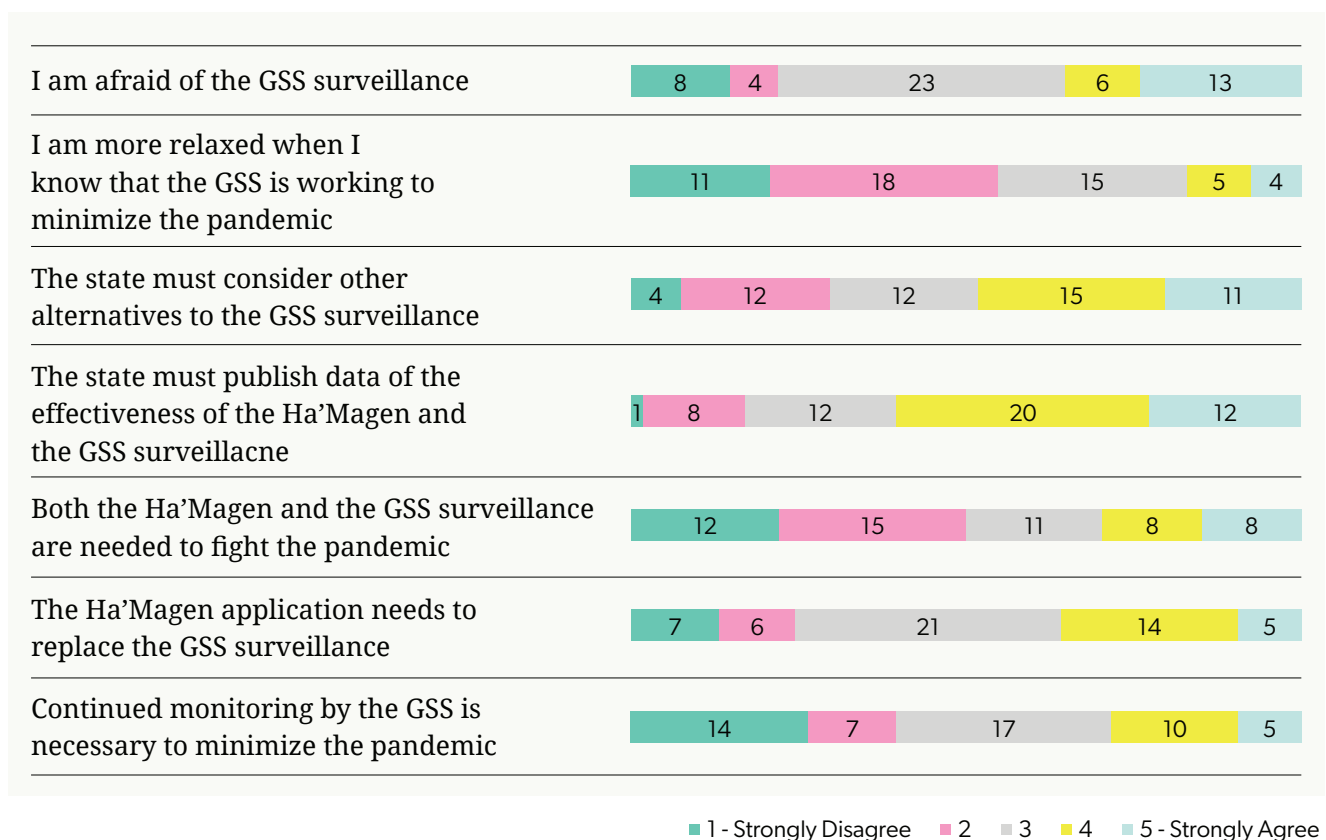## Attitudes Towards COVID-19-related GSS Surveillance

Hebrew Version

Statement	1	2	3	4	5
I am afraid of the GSS surveillance	72	48	48	26	56
I am more relaxed when I know that the GSS is working to minimize the pandemic	88	42	61	30	29
The state must consider other alternatives to the GSS surveillance	14	25	48	40	123
The state must publish data of the effectiveness of the Ha'Magen and the GSS surveillacne	8	9	29	55	149
Both the Ha'Magen and the GSS surveillance are needed to fight the pandemic	110	35	55	33	17
The Ha'Magen application needs to replace the GSS surveillance	56	44	100	27	23
Continued monitoring by the GSS is necessary to minimize the pandemic	93	39	51	42	25

■ 1 - Strongly Disagree ■ 2 ■ 3 ■ 4 ■ 5 - Strongly Agree

Figure 8.2.

Attitudes Towards COVID-19-related GSS Surveillance

Arabic Version

Statement	1	2	3	4	5
I am afraid of the GSS surveillance	8	4	23	6	13
I am more relaxed when I know that the GSS is working to minimize the pandemic	11	18	15	5	4
The state must consider other alternatives to the GSS surveillance	4	12	12	15	11
The state must publish data of the effectiveness of the Ha'Magen and the GSS surveillacne	1	8	12	20	12
Both the Ha'Magen and the GSS surveillance are needed to fight the pandemic	12	15	11	8	8
The Ha'Magen application needs to replace the GSS surveillance	7	6	21	14	5
Continued monitoring by the GSS is necessary to minimize the pandemic	14	7	17	10	5

■ 1 - Strongly Disagree ■ 2 ■ 3 ■ 4 ■ 5 - Strongly Agree

5. Discussion and Application of Findings

Three main issues emerge from the findings: the need for transparency to gain trust and user cooperation, the need for a varied and adaptive solution for different communities, and the need for solidarity and social support.

5.1. Transparency, Gaining Trust and Accuracy of the CTT

Respondents to both the Arabic and the Hebrew surveys point to the need for transparency about CTT, including what personal data is collected, how CTT works, who might see or use the data, and whether or not CTT helps in combating the pandemic. Lastly, the accuracy of the application was found a crucial element for convincing people to download CTT applications and to keep them installed.

> **Both groups showed lack of awareness regarding how the data collected by the GSS is used or the effect of CTT in fighting the pandemic.**

Findings from our survey indicate that there is a difference in awareness of GSS mass surveillance between respondents to the Hebrew and Arabic versions. These differences, however, are less pronounced with regard to the Ha'Magen application. Although both groups were concerned about compromises to privacy in the digital era, they were either indifferent or expressed only slight concern about the collection and use of personal data by state and by private corporations.

Both groups showed lack of awareness regarding how the data collected by the GSS is used or the effect of CTT in fighting the pandemic. These findings also showed concern about the lack of transparency regarding GSS surveillance and the Ha'Magen application. Both groups of respondents pointed to the need for transparency about the effectiveness of the two contact tracing methods. Similar results were found in the Pew survey: only 6% declared they were aware of the use that private companies were making of the data they collected, and just 4% thought they knew how the data collected by the government is used.[34]

> **Building trust in new CTT applications is even more difficult when they compete with applications of well-known private companies such as Google or Apple that have already gained trust among users.**

Both groups in our survey tended not to agree that there is a real need for CTT, be it governmental or private. Both groups did not have a clear opinion on whether a different state authority should replace the GSS. Neither group showed more trust in private CTT than in state CTT. However, they believed that alternatives to the GSS surveillance should be considered. In a survey conducted in the US, respondents differed about the entity that should stand behind a CTT. However, there was no clear answer as to what was the "right" entity. It depended on people's trust in government, in public entities and in private companies. One survey pointed that people tended to place more trust in a known and familiar application developed by a private company than in new applications about which they were lacking sufficient information or experience using them.[35] Therefore, building trust in new CTT applications is even more difficult when they compete with applications of well-known private companies such as Google or Apple that have already gained trust among users.

On a related note, most respondents declared they thought that the Ha'Magen application was inaccurate. Respondents to the Arabic version uninstalled the application because of technical problems and lack of information about the application's owner. However, respondents to the Hebrew version feared more possible privacy invasion, lack of accuracy and efficiency of the application and lack of transparency about how their personal data is used. In addition, while approximately two million people downloaded the updated contact tracing application Ha'Magen 2.0, half of them uninstalled it within 2 days.[36] Toch explains that the main causes for the quick reversal were privacy concerns and lack of transparency about the application's contribution to limiting the spread of the virus.[37] However, our findings indicate that in Israel, privacy issues may not be the main concern. Similarly, in the Pew survey, just 38% thought that government CTT could help, either a lot or a little, to limit the spread of COVID-19.[38] In the Australian survey, 52% believed that the state CTT would help limit the spread of the virus.[39]

> **Beyond privacy concerns, people expressed the need for more information about how the voluntary CTT application worked, whether it was accurate, who had control of the personal data it gathered, and whether it really helped in mitigating the pandemic.**

Results from previous surveys may inform the Israeli government about ways of increasing trust in voluntary CTT applications. These include stressing the advantages in protecting family members, receiving more information about the application, and availability of an independent Privacy Impact Assessment (PIA) about Ha'Magen by a trusted public organization. Findings from our survey indicate that the reasons for installing Ha'Magen 1.0 included the desire to know if one had been near a Corona patient (76.6% in the Hebrew version and 57.1% in the Arabic version). Respondents to the Hebrew version expressed more privacy concerns compared to indifference to the issue expressed by the respondents to the Arabic version. Therefore, knowing that the Ha'Magen application is less invasive to one's privacy than the GSS surveillance would convince some of the people to download the application, depending on the sector of society. In the Hebrew version, 22% (and 2% in the Arabic version) declared that knowing that others downloaded the CTT application would motivate them to do the same. Moreover, 27.6% declared they would download the application if they knew that the success of the application depended on the numbers of downloads. The accuracy of the application was usually more important in both versions than other concerns, including privacy.

As is evident, beyond privacy concerns, people expressed the need for more information about how the voluntary CTT application worked, whether it was accurate, who had control of the personal data it gathered, and whether it really helped in mitigating the pandemic.

5.2. One Size Does Not Fit All

Throughout the survey there were differences between responses to the Arabic and Hebrew versions, including the reasons cited for why to install or uninstall CTT applications, information diet, and social and behavioral preferences. For example, respondents to the Arabic survey were less inclined to abstain from small gatherings (16.9%), compared to respondents to the Hebrew version (40%). This pattern resembles differences found between Republicans (60%) and Democrats (86%) in the US, according to a Gallup survey from May 2020.[40]

> **Respondents to the Hebrew and the Arabic versions of the survey consume information about CTT applications from different channels. Their differing answers also might be due to differences in state efforts to publicize the application in different population sectors.**

Differences were also apparent in privacy perceptions between the two groups of respondents, both in their responses to baseline questions about general privacy perceptions as well as specifically with relation to COVID-19. Respondents to the Hebrew version of the survey declared that they generally avoided downloading and using applications that invaded their privacy. In contrast, the respondents to the Arabic version were indifferent to the issue or declared that they used the applications despite the problems. Privacy concerns also accounted for the main reasons to uninstall Ha'Magen application among respondents to the Hebrew version, compared to reasons that have to do more with efficiency and trust in the owner of the application in the Arabic version. The difference in privacy perceptions

can be evident also in another survey conducted in Israel among 518 respondents about the GSS surveillance, which was partially published in Twitter in June 2020 (hereinafter "Toch Survey"). In that survey, about 60% expressed the belief that the technology can collect sensitive personal information about them. However, there was a slight difference between the 42% who were concerned about the data that could be collected by the technology and 32% that were not concerned about this.[41] In a finding similar to the Hebrew version of our survey, in the Pew survey 52% of Americans said they avoided using a service or a product due to privacy concerns (not necessarily an application).[42]

It can be clearly seen that respondents to the Hebrew and the Arabic versions of the survey consume information about CTT applications from different channels. Their differing answers also might be due to differences in state efforts to publicize the application in different population sectors.

However, when it comes to perceptions towards GSS mass surveillance, the differences between the responses to the two versions of the survey can be explained by differences in awareness and trust, rather than attitudes about privacy. Respondents to the Hebrew version were less afraid of GSS surveillance than respondents to the Arabic. Although in the Hebrew version only about a third reported that they were wary of GSS surveillance, 64% thought the state should consider alternatives, and about 80% thought there should be more transparency about it. In August 2020, the Israeli Ministry of Intelligence published the results of a survey with 1,002 participants conducted by the Geocartography Knowledge Group.[43] The findings were that 77.3% of the respondents trusted the GSS in general, and in particular, 62.1% supported the GSS activity

during the pandemic.[44] The Toch survey showed different results regarding the level of trust in the government and in the GSS: 53% believed that the data gathered by the GSS would not be deleted after the crisis subsides and just 21% believed that it would be deleted. Thirty-five percent declared they could understand people who leave their cell phone at home to avoid the surveillance.[45]

Due to the differences in behavior, privacy conceptions, technology orientation and information consumption, as well as in levels of trust, regulators and government should adopt differential policies for addressing the diverse communities living in Israel. Both information channels and choice of CTT should be adapted to the relevant community. Community leaders know their members, can adjust the relevant solutions, and can influence them. Leaders' involvement can also give the relevant community a sense of solidarity and that their voice is being heard. A similar recommendation, namely, to engage communities as part of the solution in fighting COVID-19, was published in October 2020 by the WHO.[46]

5.3. Social Solidarity and Dealing with Indifference in the Arabic Speaking Sector

Studies show that a feeling of solidarity and a sense of caring for a particular person lead to higher cooperation and compliance with the isolation guidelines.[47] Incentives for self-enforcement arise especially when it is known that those quarantined are guaranteed remedies such as income security and employment security.

Most of the respondents to our survey declared that they wear a mask when they leave the house and avoid closed public places. However, the percentages dropped in avoiding public open places, public transportation, and abstaining from small gatherings.

The social segregation across sectors in the Israeli society is evident in access to information and in awareness regarding epidemiological surveillance. As expected, the exposure to national campaigns and to the coverage in mainstream media channels also differs across communities and categories of age, education and religion.

> **Israelis will not download the application to reach the critical mass needed for it to be effective, if they know that they will not receive financial or medical backing in the case that they are forced to go into isolation.**

The reasons, based on the Hebrew survey, that are expected to motivate users to download the CTT application include solidarity and transparency about the critical mass of active users required for making the application relevant and accurate. Moreover, some 20% reported that if people are required to self-isolate, the government should ensure their income, medical concerns, social care, and food supply, suggesting that such assurance could be an additional motivating factor. In the responses to the Arabic version, the motivation to install the application was divided by privacy, solidarity, and transparency concerns. It seems, then, that technology cannot be relied upon as the only solution for stopping the spread of the virus. According to the survey, solidarity, medical and financial support are also necessary. It seems that Israelis will not download the application to reach the critical mass needed for it to be effective, if they know that they will not receive financial or medical backing in the case that they are forced to go into isolation. Nor will

they download the application if they know that it generates too many false alarms and that the application's flaws may deprive them of freedom of movement and freedom of occupation, if they are erroneously forced to self-quarantine.

6. Conclusions and Recommendations

Given Israel's unique de-facto dual CTT model for mitigating COVID-19, which combines mandatory mass surveillance and the use of a voluntary application, this study mapped public perceptions related to the use of these tools among Israelis. The results of our study may be translated into policy recommendations with regards to public motivations to adopt voluntary CTT even as mandatory mass surveillance CTT operated by the GSS is promoted by the government.

> **Given the implications of the use of such unprecedented mass surveillance tools in a democratic state, public discourse about mandatory mass surveillance should extend beyond professional circles and include the whole of society.**

Our main finding is that Israelis do not have a uniform opinion about GSS mass surveillance. We report lack of awareness regarding its existence, mainly among Arabic speaking respondents. Moreover, the majority of respondents were usually indifferent or inconclusive regarding questions concerning the privacy implications of mass surveillance by the GSS. This indifference was, again, more pronounced in the responses to the Arabic version. These findings possibly result

from the fact that GSS mass surveillance is not present in daily life of most Israelis, apart from those who receive a text message that notifies them that they have been near a COVID-19 patient and must self-quarantine for 14 days. Until now, public discourse about the subject has primarily been the realm of scholars, technological and legal experts, NGOs and Knesset members. In our opinion, given the implications of the use of such unprecedented mass surveillance tools in a democratic state, public discourse about mandatory mass surveillance should extend beyond professional circles and include the whole of society.

> **Social groups differ in their motivations to download the application, they rely on different information channels for information about the application, and they specify different reasons to continue using it.**

As for the Ha'Magen application, we note that the overall indifference towards GSS surveillance does not affect the privacy perceptions of Israelis towards the voluntary CTT, and our results relating to the voluntary measures resemble those reported in other countries. Our findings, which inter alia compare the perceptions of Hebrew speaking and Arabic speaking respondents, indicate that when it comes to voluntary adoption of CTT, one solution cannot fit all. Social groups differ in their motivations to download the application, they rely on different information channels for information about the application, and they specify different reasons to continue using it.

Although participants are concerned about their privacy, they may lack the knowledge need for informed decision making, e.g. information about the institutional practices and the organizational operation of the application, and the main

technical and legal aspects. Indeed, according to the knowledge-gap hypothesis, lacking privacy literacy prevents usage that adequately reflects the user's attitudes.[49] Moreover, lack of privacy information might alienate potential participants and lead to responses that range from indifference to negative evaluation. Therefore, although "indifference" is implied by many survey responses, we assume that this attitude is based on a lack of openness and transparency, which are needed to enhance privacy literacy in general and encourage faith in the benevolence of the national system and its aspiration to act in a positive manner and consider individuals' welfare before taking actions.[50] On this continuum – between elementary information disclosure to belief- and trust-building – lays a level in which a contract is established between the citizen and the dedicated authority. The core contract level[51] is one of the influential factors in technology use, and violations of this contract have a negative effect on the willingness to reuse technology. The violation of the psychological contract with the public in the midst of the COVID-19 crisis is an unsuccessful experience that is probably at least partially responsible for the non-definitive responses. Therefore, responses indicating indifference could be obscuring hidden factors and attitudes.

We recommend adopting a flexible, bottom-up community-level policy both for informing the public about CTT and for choosing the CTT model that fits the community's needs.

We note that despite the dual contact tracing model employed in Israel, the results of our survey resemble civic perceptions of CTT around the world. They point to a lack in information about why one should download the CTT app,

about who controls and is authorized to use the personal data, and about the effectiveness of both the voluntary application and the mandatory to combat the pandemic. If they are to download the voluntary CTT application, Israelis expect it to be accurate, to not disrupt the day-to-day use of their smartphone, and to know more about its performance and results. They also express a clear need to trust the state to protect their personal data.

We therefore recommend that the state invest more efforts in conveying the necessary information about the way each CTT method works, what is done with the personal data, how accurate and effective is each method, and what is its impact on mitigating the pandemic. The complexity with which this information is relayed should be tailored to the various target audiences among the participants in the Israeli public discourse: Detailed and transparent raw data for experts and researchers, a more accessible, summarized version for the general public, and community-level adapted content for specific social groups, communities, ethnicities and population sectors.

The witnessed differences between the answers to the Hebrew and the Arabic versions of the survey were also reported as differences across social groups in other surveys around the world. We recommend adopting a flexible, bottom-up community-level policy both for informing the public about CTT and for choosing the CTT model that fits the community's needs.

Lastly, respondents to our survey express the need for social security and support from the government in case of mandatory self-quarantine, as a condition for using CTT. Given the indifference that emerged in the answers to the Arabic version of the survey, the need to encourage solidarity is especially essential for

the success of CTT in the Arabic speaking sector. Therefore, we recommend that further use of CTT be accompanied by social support and by increasing social solidarity.

The analysis of our findings results in the following recommendations:

1. Clarity about intrusion of privacy: Findings from our study confirm findings from surveys conducted in other countries, which indicate that people would like to be informed about violations of their privacy.

2. Transparency, accuracy and operation: Voluntary CTT applications should inform the user of how data is collected and used. To be widely adopted, the applications should not interfere in the day-to-day operation of the smartphone. To gain public trust, voluntary applications must be accurate.

3. Community-level information channels: Differences in media exposure across sectors necessitate adopting principles of transparency, openness and involvement in closed communities and networks. Israeli society is highly polarized, divided into numerous sectors in cities and in neighborhoods. It is therefore necessary to create multiple, dedicated, community-level information channels, for example by asking community leaders to encourage their members to adopt voluntary CTT.

4. Public involvement in decision making: Communities should be involved in the decision as to which technology will best serves their community, and they should be involved more in choosing the most effective and appropriate channels to disseminate information about the app.

5. Health and welfare approach: People need to know that if they are sent into quarantine, they are entitled to health and social support.

6. Effectivity: Privacy is not the only issue that should be addressed when explaining the benefits of voluntary CTT. For example, the accuracy of the app should also be communicated. There should be public awareness that voluntary CTTs are effective only when used by a critical mass of the population.

7. Privacy literacy: In general, more efforts should be invested in improving public awareness of the right to privacy in Israel.

8. Data-driven public discourse: In a democratic country, the re-purposing of tools originally designed for combating terror to addressing a civic health crisis should not be carried out without proper, evidence-based public discourse. While most details about the operation of GSS surveillance are confidential for security reasons, any public debate about its effectiveness and alternatives (or lack thereof) should be backed by transparent data about the system's accuracy and its actual overall success in mitigating the spread of the virus.

9. Increasing accessibility to complex data: To 'democratize' public discourse on mandatory and voluntary CTT, we believe that efforts should be invested in sharing data in levels of complexity that fits the expertise of different audiences, and that is suited for different uses. While experts should have access to raw data as much as possible, there is a striking lack of transparency in the information provided to the general public, and as a result, to the average person. Accessible information and explanation about CTT may increase public participation in the democratic discourse on the topic, and subsequently may increase the adoption rates of voluntary CTT applications.

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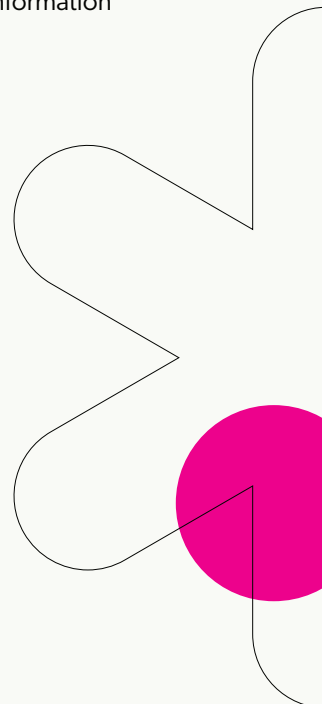
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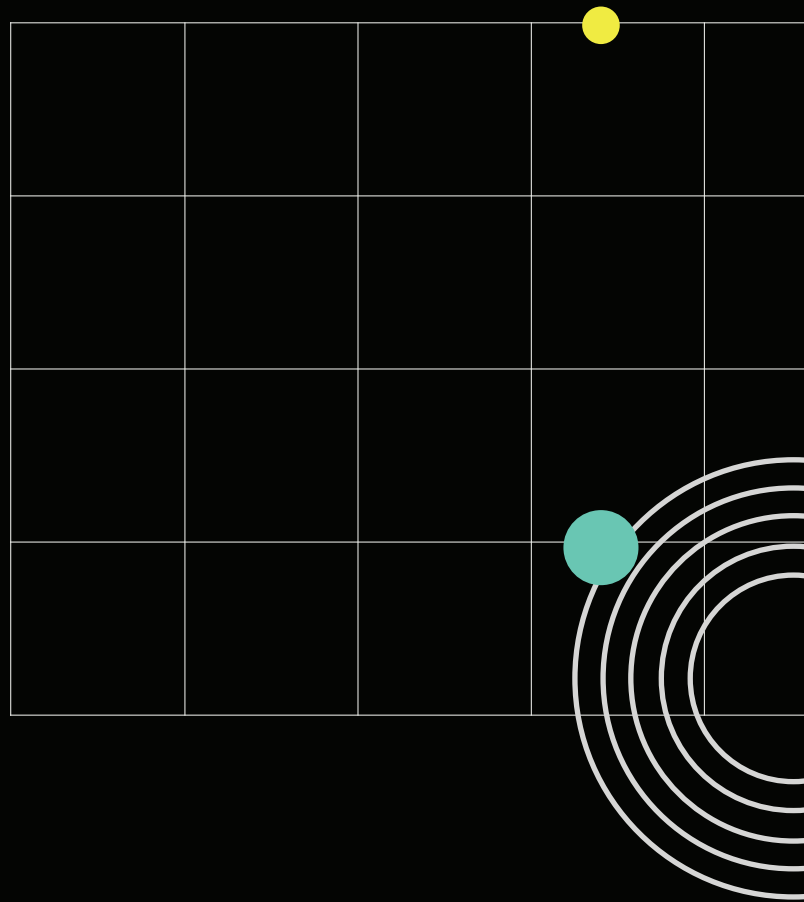Schumannstraße 8, Berlin, Germany
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Release date: November 2020

Design: www.tinker.co.il
Cover: www.moranbarak.com

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