

## Top marks: How the media got Swedes to vaccinate against swine flu

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### Abstract

Based on Bourdieu's theory of social capital, this article analyses Swedes' willingness to vaccinate during the swine flu outbreak in autumn 2009. The analysis is based partly on responses to a survey of 3,000 Swedes that was conducted when the virus was spreading, and partly on a comprehensive content analysis of the largest Swedish news media's coverage of swine flu.

The starting point is a model where people's vaccination willingness is analysed against the background of their social capital, media consumption, perceived concern about catching the virus, and trust in how the authorities were handling the influenza virus.

The results show that social capital in terms of class affiliation, education and profession in covariance with media consumption impacted both the perception of concern and trust in the authorities, and that, in this case, trust in the authorities had greater significance for the rate of vaccination than the perception of concern.

**Keywords:** Swine flu, trust, social capital, journalism, news, media, media effects, survey investigation, content analysis.

### Introduction

At the end of April 2009, the World Health Organization (WHO) held a crisis meeting due to a flu virus that was suspected of causing 60 deaths in Mexico. Swine viruses had previously been known to circulate among pigs, but a modified form that quickly came to be known as swine flu, had now been transmitted to humans. On 29 April, Sweden's largest morning newspaper, *Dagens Nyheter*, reported that the virus had spread to 12 countries, several of them in Europe. One day earlier, 28 April, WHO had raised the six-phased influenza pandemic alert from Phase 3 to Phase 4.

The name "swine flu" became widely accepted, even though many authorities – and representatives of the pork industry – tried to launch other names, such as the scientific Influenza A (H1N1) or more neutral "new flu" (Vigsø 2010). Swine flu is also the name used in this article.

The virus reached Sweden in early May, when a woman returned from the US with the illness. Two weeks later, the government decided to classify the virus as a danger to public health, entailing that doctors were required to report new cases to the National Board of Health and Welfare. At the end of May, the Swedish Institute for Infectious Disease Control (SMI) reported that at least ten people had fallen ill and one month later, that figure had risen to 74 people. However, no Swedes had yet died of the virus. During the

summer, the virus spread across the world and on 11 June, WHO raised the risk assessment to Phase 6, which meant that swine flu was now considered a pandemic.

Sweden confirmed its first death from swine flu in August 2009, and 29 people died of the virus during the following winter – 21 men and 8 women. 25 of these people belonged to a risk group ([www.smittskyddsinstitutet.se](http://www.smittskyddsinstitutet.se), 9 March 2010). Most of the deaths occurred in October and November. Up until the end of that year, county councils reported that a total of 10,955 cases had been confirmed by laboratory tests, and 1,286 people had been admitted to hospital. The SMI estimated that up to 620,000 people in Sweden could have fallen ill from the virus, which amounted to 6-7 per cent of the population ([www.smittskyddsinstitutet.se](http://www.smittskyddsinstitutet.se), 4 January 2010).

The European Medicines Agency (EMA) approved the use of Pandemrix vaccine in late September 2009, and vaccinations began in Sweden in mid-October after health authorities decided to offer and encourage all Swedes to accept the vaccination. Just a few weeks later, one million people had received the vaccine, in the first instance risk groups and medical staff (*TT*, 27 October 2009). The corresponding figures by the end of the year were 5.5 to 6 million (*Aftonbladet*, 15 January 2010; *Dagens Nyheter*, 22 January 2010).

In total, 60 per cent of all Swedes are estimated to have been vaccinated. By international standards, Sweden's vaccination campaign was successful. The number of deaths per million was 2.9, which is less than half of the reported deaths in neighbouring Nordic countries, and significantly less than in most European countries.<sup>1</sup> No new deaths have occurred in Sweden since the beginning of January 2010.

At the same time, parts of the population did not want to vaccinate themselves. Some people could not – due to a potential allergic reaction to the vaccine – others did not dare, or declined for other reasons.

Swine flu attracted constant and sometimes intensive media coverage, from the outbreak in Mexico in April 2009 until the pandemic threat subsided in early 2010. For example, the five largest daily newspapers published 1,515 articles, corresponding to 574 full pages, and the two largest television news programmes broadcast 313 features, amounting to five hours and 32 minutes (Ghersetti & Odén 2010).

This article analyses the media effects on the willingness of Swedes to accept the vaccination during the swine flu outbreak. A starting point is Bourdieu's theories of social capital, defined as the cultural and material attributes that characterise and separate different individuals and groups (see for example Bourdieu, 1993). Special focus is given to media consumption, which is problematized in relation to other background variables, and the media's framing function (Entman 1993, Scheufele 1999, Callaghan & Schnell 2001, McCombs 2005, Weaver 2007), which means that the picture of the influenza presented by the media could, for example, have influenced media consumers' perception of its danger and the effectiveness of the measures taken by the authorities. The article is further based on the assumption that people's concern for swine flu impacted their willingness to get vaccinated, as did their trust in how the

authorities handled the epidemic. Putnam has emphasized the latter aspect, for example in his early work in Italy (Putnam, 1993).

The empirical basis for this article derives partly from a survey conducted in autumn 2009, when 3,000 Swedes were asked about their media consumption and their trust in how authorities were handling swine flu, and partly from a content analysis of reporting on the influenza virus by the largest news media. <sup>ii</sup>

### **A model for crisis communications during the swine flu outbreak**

When WHO declared an influenza epidemic in summer 2009, news reports began describing swine flu as a potential social crisis. This was also the perspective adopted by Swedish authorities.

When a crisis or threat to society arises, authorities need to inform the public about the extent of the threat and how they can protect themselves. During the swine flu outbreak, this involved – at an individual level – informing people about how dangerous the virus was, how they could protect themselves, what they should do if they fell ill, as well as information about the vaccine and how they could receive it. At community level, this mainly involved informing about the heightened state of alert in central sectors such as healthcare, schools and public transport, and the economic consequences of the virus.

People's perceptions of and attitudes toward threats and risks are based on their knowledge that a risk or threat is imminent. People who are not aware of a risk are in a way risk-free – they behave as though there is no risk (Beck 1992). Accordingly, when acute threats, crises or risk-filled events occur, it is vital that authorities and other responsible actors respond quickly to give the public correct information about what has happened, how serious it is and the best way to protect themselves (Palm & Falkheimer 2005). One of the main messages from the authorities this time was that everyone who could should vaccinate themselves.

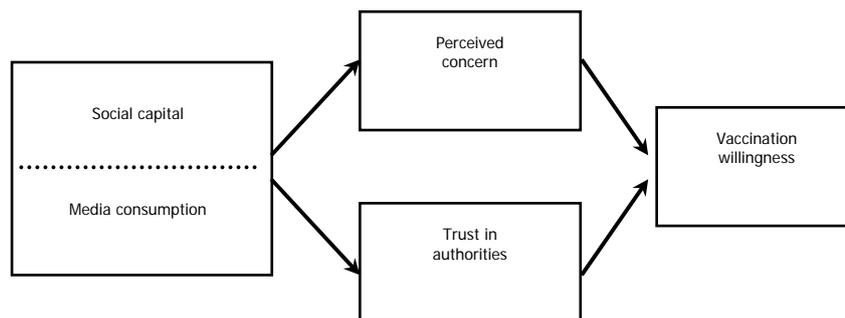
Many organisations today have their own websites where they can communicate directly with the public, which means that they can circumvent the media's gatekeeper function (Karlsson 2010). The websites of Swedish authorities were also obvious channels for information about the swine flu. Theoretically, they could reach many people because a large part of the population has access to the Internet (Findahl 2010). During the swine flu outbreak, the Swedish Civil Contingencies Agency (MSB) coordinated many of these authorities in a shared information service, krisinformation.se. Attempts were also made to communicate via social media, such as Facebook (Israelsson & Häggroth 2010). Media ads and posters in public places were another potential line of communication. This communication channel was also used.

However, the great efforts that these authorities devoted to press conferences and being visible in press, radio and on television show that traditional news reporting remained a key communication channel. The

slow and generally limited spread of the influenza virus also meant that few Swedes had time to develop their own or close experiences of swine flu before it was time to be vaccinated. Overall, the major news media became the principal channel for information about the virus. As such, crisis communications – in this case – can be described as a process that took place between news media, the public and the authorities, where all three parties were involved (*cp* Nordlund 2000).

This article analyzes one significant aspect of the crisis communication about the flu, namely the extent to which people embraced the authorities' messages about vaccination. The analysis is based on a model assuming that people decided to get vaccinated for mainly two reasons: firstly, because they were worried about the infection, and secondly, because they trusted that the authorities had chosen the right way to fight it, i.e. they assumed that vaccination helped. (Figure 1).

**Figure 1: The effect of social capital and media consumption on vaccination willingness**



One underlying reason for both concern and trust is an individual's social capital, where media consumption in this case plays an important role. People received the authorities' messages through various media, which may have given completely or partially different images of the epidemic. The interpretation of the media images was then based on personal characteristics such as age and gender, combined with other social, material and cultural attributes. Correspondingly, the personal characteristics are also presumed to have influenced both the degree of trust in how the authorities were handling the influenza virus and the concern for the influenza. In the end, the decision to accept the vaccination or not was based on these factors: the individual's degree of concern, and trust in how the authorities were handling the influenza virus.

### **Social capital and media consumption**

Thus, the underlying factor is the individual's social capital. According to Bourdieu, this is the sum of the individual's material and cultural capital; in other words, the possessions, habits, lifestyles, perceptions and values that denote the position of an individual or group in society (Bourdieu 1993). Social capital is characterised and evident from the individual or group's pattern of behaviour, or what Bourdieu refers to as "habitus". In other words, an individual's habits and attributes are an expression of the norms and values that characterise the social group that he or she belongs to, and an expression of belonging to that group.

Groups with similar social capital share preferences for food, culture, leisure activities and much more, and are thus part of the same social field. Different fields integrate with each other and are hierarchically ordered. Groups with high social capital are at the top of the hierarchy, or hold high material and cultural capital. Groups with low social capital are at the bottom of the hierarchy. In Bourdieu's model of social positions and lifestyles, which is based on studies of French society, the capital-strong groups consist of high social classes, academics, people with creative professions and high-level civil servants with good salaries who are interested in high culture and arts, high-quality newspapers, tennis and fine food. The capital-weak groups consist of labourers and unskilled workers with low incomes, whose interests range from football and rugby to elementary cooking, accordion music and watching television. Accordingly, there is a close connection between a group's social position and its habits, values and behaviours. Social capital can thus be defined and demarcated from a large number of co-varying attributes and factors. In this article, the definition of social capital is primarily based on three factors: class affiliation, education and profession.

It is possible that France, in certain respects, is a more pronounced class society with wider economic and cultural gaps than Sweden. Nevertheless, Bourdieu's theories are also applicable to Swedish conditions subject to certain modifications, particularly in relation to the media and media habits. Every country has a unique media environment, which is formed by the media that are offered and how they are consumed by the public (Reimer 1994). One special feature of the Swedish media environment is the wide spread of subscribed local morning newspapers, and the strong position of public service media.

Compared with many other European countries, Sweden has also had a relatively long and stable media structure, dominated by a strong press that until quite recently was owned and managed by political parties, and a state-owned broadcasting monopoly. Commercial terrestrial television was introduced as late as 1991, privately operated local radio stations in 1993, and the first free daily newspaper, *Metro*, in 1995 (Hadenius, Weibull & Wadbring 2008).

In recent years, however, media consumption has become increasingly diversified, particularly between different age groups. But while the media offering may have broadened and established media habits

changed, reading the morning newspaper and support for public service media is still strong in all social classes (Holmberg & Weibull 2010a). Despite modern society's growing individualisation and the changing nature of cultural traditions, media habits in Sweden are still primarily driven by traditional background factors such as age, gender and education (Reimer 1994).

By international comparison, Swedes are avid consumers of media content. On average, every Swede devotes 352 minutes per day to various types of media (Mediebarometern 2009). The media that people consume varies but, overall, Swedes devote most time to radio and television, with the Internet in third place and daily newspapers fourth.

Individual media consumption is primarily influenced by factors such as age, gender and education. Gender has most significance for what sections of the newspaper a person reads, and the broadcasts that are watched and listened to, but has no major impact on the amount of time individuals devote to traditional media such as daily newspapers, radio and television. Age influences the time that is devoted to media consumption, and the choice of content. Older people, to a large extent, consume more daily newspapers, radio and television, and choose a broader content than other age groups. Education influences in that well-educated people who belong to groups with high social capital tend to consume news in morning newspapers, and public service radio and television, while less-educated people who belong to groups with low social capital tend to consume news on commercial television and in the tabloids (Färdigh 2008, Nilsson 2008). However, there is no major difference in the time that various social groups devote to media consumption.

Accordingly, the choice of media and content is influenced by social background factors such as age, gender, education, profession and social class; in other words, the dispositions that play a key role in forming an individual's social capital. At the same time, media usage is an expression of the same social capital, in that different social groups select and confirm their social affiliation through their choice of media consumption.

### ***Perceived concern and trust in authorities***

It is well known that news distribution directly and indirectly can affect an individual's perceptions of insecurity and danger during a crisis (*cp* Jarlbro 2004). This is partly due to an individual risk assessment or "personal risk", and partly to a risk assessment for the society, a "general risk". One interpretation of the findings has been that the media mainly influences the individual's perception of a general risk, while interpersonal communication influences the individual's perception of personal risk (Coleman 1993, Jarlbro 1993).

Based on theories of agenda setting, assumptions have been made that the public perceives threats and risks that are reported in the media as more dangerous than threats and risks that are not reported. In some situations, however, when individuals feel stress, discomfort or vulnerability in connection with for instance health-related issues, they may also seek more information or confirmation in the media. A certain degree of covariance may therefore exist between media information and inter-personal information (Morton & Duck 2001). The behaviour at an influenza outbreak could be an example of that.

People who experienced the swine flu as a threat could, of course, have acted by being careful with personal hygiene and avoid meeting infected persons. But according to information from the authorities the most important thing was to get vaccinated. For the public to perceive this as the right thing to do, they need to have confidence in the authorities. Especially, they must believe that the authorities know what should be done, and that they act for the common good.

Trust in authorities naturally varies. It can be high for some authorities, while lower for others. Some social groups may generally have a greater trust than others and there may, of course, also be differences between countries. According to Miller, trust in authorities depends on the cumulative outcome of exchanges between authorities on the one hand and citizens on the other (Miller 1974). The more goods the politicians deliver, the more trust they get from the citizens. He also shows that trust can differ between social groups in society, and that trust is not static. A group that has confidence today might mistrust authorities tomorrow.

The studies of Putnam, which emphasises the importance of social networks in society, are already mentioned. The more networks there are, the greater trust in all levels of society (Putnam 1993, 1995). Other research has shown that political scandals tend to decrease trust in the authorities (Bowler & Karp 2004). Reversed, absence of scandals results in a stronger trust.

Authorities can also build up a public trust by acting in a professional way. Properties that generate trust are competence, predictability, consistency and cautious decision making (Braithwaite 1998).

The political culture and system may also play a role. For example open access to government information makes decision making a more open process in some countries in northern Europe, "characterized by an ideology of collective responsibility for the welfare and participation of all groups and citizens" (Hallin & Mancini 2004). Also, the openness and type of political system has implications for the work of the media.

### **Mostly good information**

Swedish mass media reported repeatedly on swine flu from April 2009, when deaths occurred in Mexico, throughout the summer and autumn, when the epidemic was most intense in Sweden, and for a few

months in 2010, by which time the outbreak had subsided. A content analysis shows that the coverage of swine flu focused mainly on how the virus could be handled, how far it had spread and the people who had fallen ill (Ghersetti & Odén 2010). The most frequently appearing individuals were Annika Linde, State Epidemiologist at the Swedish Institute for Infectious Disease Control, Anders Tegnell, the Senior Medical Officer of the Communicable Disease Unit at the National Board of Health, and Maria Larsson, the Swedish Minister for Public Health and Social Services, all representing responsible health authorities. Their repeated and explicit message was that everybody should accept the vaccination, which the media, in principle, supported without question.

In general, the majority of Swedes thought that the information provided by the media concerning swine flu was good. However, assessments of the reporting varied concerning certain aspects. Four of five people responded that the media gave good information about protection from the virus, and two of three were satisfied with information about how they could get vaccinated. About equally as many also responded that they had received information about how dangerous the illness was, and what to do if they fell ill. But only one of three respondents was satisfied with the information about how effective the vaccine was, and approximately one of two people was satisfied with information about the consequences of swine flu for society (Table 1).

**Table 1. The public's assessment of the information in Swedish news media in relation to six aspects concerning swine flu in 2009 (per cent):**

	Good information	Not good information
How to protect yourself from the virus	81	19
How to get vaccinated	66	34
What to do if you fall ill	64	36
How dangerous swine flu is	63	37
The consequences of swine flu for Swedish society	52	48
How effective the vaccine is	35	65

**Comments:** The question was "What do you think about the information on swine flu in the Swedish news media concerning the following:"

**Source:** The National SOM survey, 2009.

Media reporting during the autumn contained frequent information and recommendations concerning the epidemic, for instance about good hand hygiene and where and when various groups could get vaccinated. However, there was no exact information about how serious the consequences of swine flu could be for society in general, and, for example, whether and where public transport or the healthcare sector had been

affected. The same applied for how effective the vaccine was – when the outbreak appeared in early summer 2009, the vaccine had not as yet been launched on the market. It can therefore be said that the public's assessment of media reporting reflects the clarity of the information that was provided. People were more satisfied with the information that was clear and precise than with the one that was vague and speculative.

Dissatisfaction with the media reporting on swine flu varied with age. People aged 65 and over were considerably more satisfied (70 per cent) with the information provided by the media than people aged 30 or younger (50 per cent). Women, in general, were more satisfied than men, but the difference was no more than ten percentage points.

Because people with only compulsory school education comprise almost three quarters (72 per cent) of the people aged 60 or older, the difference between various ages coincides with the fact that less-educated people were generally more satisfied with the reporting than well-educated people. The greatest difference between how less and well-educated people assessed the information was related to the two questions where media information was most uncertain: i.e. how effective the vaccine was, and the consequences of swine flu for Swedish society. For these points, well-educated people were considerably less satisfied with the reporting than less-educated people, and the difference between the two groups was 12 percentage points. Overall, people with high social capital were also less satisfied with the information than people with low social capital.

In general, those people who consume news often were more satisfied with the information that the media provided about swine flu than those who rarely consume news. The age factor is also significant here because older people consume media content to a considerably greater extent than younger people (Färdigh & Sternvik 2008).

How often people consumed media content, and as such also knew what the media actually reported on, thus impacted their assessment of the quality of information that the media provided about swine flu. The higher the degree of consumption and knowledge of media content, the milder the criticism.

### **Moderate concern for the virus**

Most news about swine flu was published during October and November, when the number of deaths was highest and vaccinations had begun. The content analysis shows that a large proportion of the news presented the virus as a threat and warned about its consequences. Half of the features and articles contained clearly alarmist elements.<sup>iii</sup> These were partly related to how contagious the virus was and the risk for falling seriously ill and in the worst case dying; and partly about how many people could be affected

and that essential social services, such as public transport, healthcare and schools, could be brought to a standstill due to the high rate of sickness absence. In many cases, parallels were drawn with the Spanish flu epidemic when tens of thousands of people died in Sweden alone at the end of the 1910s.

Despite the alarmist journalism, Swedish citizens were not particularly frightened. Previously published studies have shown that a great majority (70 per cent) felt that the media paid too much attention to the swine flu (Flash EB Series #287), and how individual media consumers even requested that the media stop exaggerating the risks of swine flu (Karlsson 2010).

In the survey conducted in autumn 2009, most respondents, about 80 per cent, also claimed that they were either not particularly concerned, or not concerned at all. Only 16 per cent felt a personal risk, and 22 per cent were concerned about the consequences of the virus for Swedish society. For the most part, these two groups are the same people; those who were concerned about themselves were also concerned about the other effects of the virus. A comparable European study shows that only 31 per cent of the Swedes believed it was likely that they would personally catch the virus (Flash EB Series #287). Concern for swine flu peaked in November, when 21 per cent expressed concern for themselves, and 31 per cent for the social consequences of the virus. This peak coincided with a rise in the number of deaths, and a sharp increase in the number of people who had fallen ill; themes that media reporting returned to every day.

That more people expressed a concern for society rather than themselves is not unusual. Psychological research has shown that people usually believe that threats and risks will affect others first (Weinstein & Klein 1995). This phenomenon, known as *optimism bias*, is not usually impacted by factors such as age, gender, profession or education. It is more closely aligned with a general and often unrealistic blind faith in one's own invulnerability and luck, from the risk of being caught for speeding or losing money to being diagnosed with cancer (Weinstein 1984, 1987). In general, information that circulates between people also affects their assessment of danger and risks more than media reporting (Wilkinson 1999, Tulloch & Lupton 2001). The risks that people are aware of due to media reporting, i.e. when they personally don't know anyone who has been affected, are perceived as less of a personal risk even though such problems can impact society in general (Coleman 1993, Morton & Duck 2001).

During the swine flu outbreak, women in general were slightly more concerned about the virus than men, and people aged 65 or older were more concerned than other age groups. Middle-aged people were least concerned. One possible explanation could be that most Swedes between 50 and 64 years are still relatively healthy and no longer have small children, who were at more risk for the virus than adults. Another reason may be that they believed they were immune since they experienced similar epidemics in the 1950s and 1960s.

There was also a clear covariance between people's perceptions of concern during the epidemic and their social position. Among people with relatively low social capital, 18 per cent expressed concern for themselves, and 25 per cent expressed concern for the social consequences of swine flu. The corresponding figures for people with high social capital were 11 and 17 per cent, respectively.

However, the people who were most concerned were the people who believed their health was poor and were not satisfied with their lives. One fourth (25 per cent) of these people were concerned about themselves, and about one third (32 per cent) were concerned about society in general.

**Media consumption and concern for the virus**

Many Swedes thus received most of their information about swine flu through mass media sources. Accordingly, an interesting question is whether the media helped to calm or frighten the public; another is whether there were differences in the media content that the various social groups consumed.

The survey shows that those people who said they read a morning newspaper and listened to public service radio every day were slightly less concerned than those people who never or rarely consumed these media. This applied to concern for themselves, and concern for society in general. However, those people who said that they watched television news every day, on both public service and commercial television, and read the tabloids six to seven days per week, were more concerned than people who never or rarely watched the news there. It would therefore seem that the morning newspapers and public service radio helped to reassure people, while television news and the tabloids made them more concerned (Table 2).

**Table 2: Number of people concerned about swine flu and the consequences for them personally, and the consequences for Swedish society in relation to how often each respective medium is consumed 2009 (per cent)**

Number of people concerned about <u>themselves</u> in relation to how often they consume news in various media:			Number of people concerned about <u>society</u> in relation to how often they consume news in various media:		
Consume media:	Daily	Rarely/never	Consume media:	Daily	Rarely/never
News on public service radio	13	16	News on public service radio	18	23
Morning newspaper	16	18	Morning newspaper	23	26
News on public service television	17	15	News on public service television	24	21
Tabloids	21	14	Tabloids	25	21
News on commercial television	20	13	News on commercial television	30	17

**Source:** The National SOM survey, 2009.

The media content study that was conducted in conjunction with the survey may contain explanations for these differences. It shows that the news coverage on television and in the tabloids held a more alarmist tone, and that the tabloids and, to a certain extent, the television news featured more news about people who had fallen ill or died from swine flu (Ghersetti & Odén 2010). The tabloids also featured more news items that focused on reactions to the illness and the vaccine, such as side effects (Table 3).

**Table 3: Number of news items with each topic as the primary subject in four types of media (per cent)**

	Morning newspaper	Radio	TV	Tabloids	All media
Fallen ill, died from swine flu	17.3	18.8	21.4	27.5	21.4
Reactions to the illness and vaccine	6.0	3.8	2.5	9.1	6.2

Accordingly, there is a possibility that the concern held by some groups can be explained by the media content that they consume. Survey data also show, to a greater extent, that less-educated people and those who perceive themselves as working class consumed television news and the tabloids that featured more alarmist news items, while people from white-collar homes were overrepresented among those who listen to public service radio broadcasts, where alarmist news items were less frequent. By tradition, the morning newspapers in Sweden have readers from all social groups.

### **Generally high trust in the authorities**

In addition to concern, the other factor that impacted people's willingness to vaccinate, according to the analysis model in Figure 1, is their degree of trust in the authorities, and the extent to which the public trusted the authorities' judgements and intentions.

By international comparison, people who live in Sweden have a high and stable trust in the authorities and other parts of society (Kaase, Newton & Scarbrough 1997). Trust in institutions that offer some form of social service, such as healthcare, universities and colleges, courts and the police, is particularly high. More than half of Swedes claim that their trust in these institutions and authorities is high (Holmberg & Weibull 2010b). Younger people generally have slightly higher trust in social institutions than older people, and well-educated people have higher trust than less-educated people. Essentially, Swedes have a generally high level of social trust, which also co-varies with the trust that they have in other people (Rothstein 2010).

The task of handling swine flu in Sweden was assigned to a number of authorities, which were to organise

the purchase and distribution of the vaccine, plan a strategy for the vaccinations, mobilise health services and, not least, inform the public about the seriousness of the epidemic, and encourage as many people as possible to accept the vaccination. An ultimate responsibility for the success of these measures lay, as always, with the Swedish government and, in this case, with the Minister for Public Health and Social Services.

The authorities concerned chose the joint strategy of attempting to instil calm by conveying the impression that the situation was under control while simultaneously urging action – which, in the first hand, was vaccination (Ghersetti & Odén 2010).

The public's trust in how the Swedish government, central authorities and their own county councils were handling swine flu appeared to be relatively high. Almost half of the respondents said they had a lot of trust in the authorities and only one-seventh said that they had little trust. People's trust was highest for county councils in their own region, in other words, for the authorities that were directly responsible for health services (Table 4).

**Table 4: Percentage with a lot, respectively, little trust in how various authorities were handling swine flu.**

	A lot of trust	Neither a lot nor little	Little trust	Total	Trust-balance	Number of responses
The Swedish government	42	42	16	100	+ 26	1 285
Central authorities	45	41	14	100	+ 31	1 296
Local county council/region	50	37	13	100	+ 37	1 338

**Comments:** The trust-balance measure shows the difference between the percentage with a lot of trust and the percentage with little trust.

**Source:** The National SOM survey, 2009.

However, a comparison with Swedes' general trust in various social institutions suggests that trust was slightly lower during the swine flu outbreak than otherwise. Comparable surveys show, for example, that 69 per cent of people usually say they have a lot of trust in health services, and only 10 per cent have little trust (Holmberg & Weibull 2010a). During the swine flu outbreak, the corresponding percentages were 50 per cent and 13 per cent, respectively. One explanation could be the problems associated with vaccinations at local medical centres such as queues and failed deliveries. However, the percentage of people with a lot, respectively little, trust in the Swedish government was the same during the swine flu outbreak as otherwise.

The pattern of trust during the swine flu outbreak was otherwise the same for women as for men, and trust

among older people was somewhat higher than the levels of trust among younger people. The latter deviates from a general pattern where young people usually say they have more trust in social institutions than older people. During the swine flu outbreak, this result can be interpreted against the background of the older people, particularly because of their weak health, being concerned about swine flu to a significantly higher degree than young people, and that the vaccine and the priorities made by health services were probably experienced as reassuring and confidence-inspiring. The analysis also shows that city inhabitants felt a significantly higher degree of confidence in how the authorities were handling the epidemic than rural inhabitants.

However a pattern can also be seen in how various social groups perceived the government's, central authorities' and the local county councils' handling of the swine flu.

A first result in the analysis is that the same groups showed most trust in all three authority categories. In other words, those groups who felt most trust in the Swedish government also felt most trust in the authorities, and the county councils that were responsible for the healthcare services. Another result is that groups claiming a lot of trust comprise high-level civil servants and well-educated people. A majority also responded that they belonged to a high white-collar class. In Bourdieu's terminology, the people who trust the authorities' handling of swine flu may therefore be categorised as a group with high social capital.

### **Media consumption and trust in the authorities**

The analysis also reveals correlation between media consumption during the swine flu outbreak, and the degree of trust in the authorities. On average, people who often read morning newspapers, listened to public service radio and watched public service television had higher trust in the authorities than those who rarely consumed these media. For people who often read the tabloids, however, the relation was the reverse; they had lower trust in authorities than those who rarely consume tabloids. For those who watched the news on commercial television channels no differences were observed (Table 5).

**Table 5: Percentage of people with a lot of trust in how the authorities were handling swine flu in relation to how often they consume each respective news medium (per cent)**

Consume media:	Daily	Rarely/never
News on public service radio	49	43
News on public service television	48	38
Morning newspaper	46	40
News on commercial television	46	45
Tabloids	37	48

**Source:** The National SOM survey, 2009.

This pattern matches the media consumption pattern in groups with high or low social capital. People with high social capital who read morning newspapers and listened to public service radio had more trust in the authorities than people with low social capital who read the tabloids and watched commercial television.

#### **To vaccinate or not**

The Swedish vaccination campaign against swine flu began at the end of September 2009, when authorities decided that all Swedes would be offered the vaccine. According to an agreement with the pharmaceutical company Glaxo Smith Klein, the Swedish government could purchase 18 million doses, which was enough to provide two injections for each person. The vaccination was given to special risk groups and medical staff first, but all citizens were implicitly encouraged to vaccinate themselves against the virus.

As expected, the degree of concern that people felt impacted their willingness to vaccinate. Concern for themselves influenced their decision to a greater extent than concern for society. Among those people who were concerned for themselves because of swine flu, 67 per cent said that they would accept the vaccination and 5 per cent had already done so when the survey was conducted in October and November in 2009. Among those people who were concerned about the consequences of the virus for society, 60 per cent planned to accept the vaccination, and 4 per cent had already done so (Table 6).

**Table 6: Percentage of people who were concerned, and not concerned, for themselves and for Swedish society, and who planned to vaccinate in 2009.**

	For themselves		For society	
	Concerned	Not concerned	Concerned	Not concerned
Plan to vaccinate	67	41	60	40
Have already done so	5	3	4	3
No vaccination	7	29	12	30
Don't know	21	27	24	27
Total	100	100	100	100
Number of responses	491	2770	687	2533

**Source:** The National SOM survey, 2009.

As previously mentioned, however, not particularly many people were in fact concerned. Consequently, it is worth noting that among those people who were not concerned, neither for themselves nor for society, as many as 44 per cent responded that they still planned to accept the vaccination or had already done so. Accordingly, most of the people who accepted the vaccination were not concerned about the virus. The question then becomes why they still chose to accept the vaccination.

One possibility, in line with the model in Figure 1, is that they vaccinated themselves simply because they trusted the measures that were taken by the authorities. As previously mentioned, the authorities encouraged all Swedes to accept the vaccination. With very few exceptions – such as small babies and some allergy sufferers – the offer applied to everybody, regardless of age, profession, gender or physical condition. With one single exception – the morning newspaper, *Svenska Dagbladet* – all analysed media supported the message issued by the authorities, which probably added to the strength of the encouragement.

In the survey, 45 per cent of the respondents said they had a lot of trust in how the Swedish authorities were handling the influenza epidemic, 14 per cent had little trust, and 40 per cent had neither a lot nor little trust.

The degree of trust in the authorities was also shown to affect people's willingness to vaccinate. Among people with a lot of trust, an average of 60 per cent responded that they intended to accept the vaccination or had already done so. Among people with little trust, the corresponding figure was 33 per cent, and among those who had neither a lot nor little trust in the authorities, the figure was 42 per cent (Table 7).

**Table 7: Difference in vaccination willingness based on trust in how the authorities were handling the influenza virus.**

	Lot of trust	Neither a lot nor little	Little trust
Plan to vaccinate	56	40	32
Have already done so	4	2	1
No vaccination	19	29	43
Don't know	22	29	24
Total	100	100	100
Number of responses	1 770	1 558	577

It can therefore be said that a large number of Swedes accepted the vaccination because of persistent encouragement by the authorities, not because they were concerned about the consequences of the epidemic. They did so because they trusted that the authorities were taking the right measures.

The highest level of trust in the authorities and willingness to vaccinate was seen among people with high social capital (Table 8). In relation to education, however, the issue must be problematized due to the education explosion that has taken place during recent decades. The basic 12-year school education that is now considered normal was seen as relatively high education one or two generations ago. In relation to education alone, willingness to vaccinate was highest among people with higher education, but it was next highest in a group with relatively low education. However, a closer analysis – where educational levels are controlled for the age factor – shows that willingness to vaccinate was considerably higher in people with higher education in each of the age categories except the youngest group, which can largely be explained by the fact that this group has not yet had time to acquire a particularly high level of education.

**Table 8: Difference in vaccination willingness among people with high or low social capital (per cent).**

	High capital who have vaccinated, or plan to vaccinate (%)	Low capital who have vaccinated, or plan to vaccinate (%)	Difference (effect of social capital)
Education	52	45	+7
Class affiliation	59	41	+18
Profession	54	40	+14

Vaccination willingness also co-varied with how often people consumed various media. The people who often consumed news in general, were more willing to vaccinate than those people who did not consume news. There were also differences between people with different media habits.

**Table 9: Difference in vaccination willingness among people who often and those who never or rarely consume news in different media (per cent).**

	High-consuming audience who have vaccinated, or plan to vaccinate (%)	Non-audience who have vaccinated, or plan to vaccinate (%)	Difference (effect of media usage)
Public service television	54	31	+ 23
Morning newspapers	52	40	+ 12
Public service radio	55	43	+ 12
Commercial television	52	41	+ 11
Tabloids	49	47	+ 2

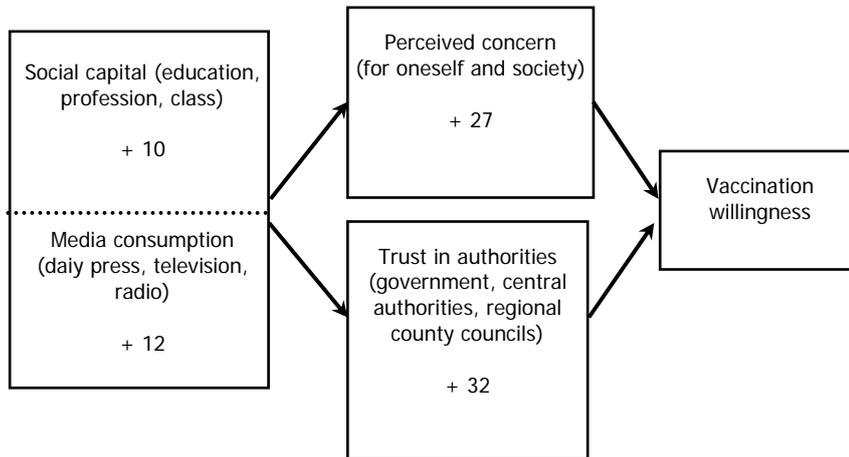
**Comments:** The index shows the difference in vaccination willingness among people who consume news often (6-7 days/week for television, radio and morning newspapers, 3-4 days/week for the tabloids) in each respective medium, and those who never or rarely consume media news. In other words, it shows the effect of media usage on vaccination willingness. The index can vary from +100 to -100.

**Source:** The National SOM survey, 2009.

In general, tabloid readers showed somewhat lower willingness to vaccinate than consumers of other news media, but the difference was not major. Most positive to the vaccination were audiences of public service radio and television news. However, reading the tabloids had a negligible effect on willingness to vaccinate. Watching public service television news had a relatively large effect, insofar as people who did not watch these news were significantly less willing to accept the vaccination than others. One explanation for this strong effect could be that Swedes in general, 72 per cent, have very high trust in the state-owned public service television and its news reporting (*Förtroendebarmetern* 2009).

To summarise, all of the factors in the analysis model in Figure 1 have a positive effect on willingness to vaccinate in that high values in each of the factors increases willingness to vaccinate.<sup>iv</sup> Thus, people with high social capital were more willing to accept the vaccination (effect measurement: +10 percentage points) than people with low social capital, and people who consumed media often were more willing (effect measurement: +12 percentage points) than people who did so rarely. Furthermore, vaccination willingness was higher in people who were very concerned about the virus (effect measurement: +27 percentage points) than among people who were not concerned, and higher among people with a lot of trust in the authorities (effect measurement: +32 percentage points) than people with little trust (Figure 2).

**Figure 2: Effect of social capital, media consumption, concern and trust in the authorities on vaccination willingness during the swine flu outbreak.**



### Conclusions

Many months after the influenza epidemic had subsided, at least the first wave, and at the same time as some media once again has questioned why Sweden purchased 18 million doses of vaccine for almost € 100 million, we can verify that around 60 per cent, or 5.5 million Swedes, accepted the vaccination, which is the highest figure in Europe (*Svenska Dagbladet* 28 June, 2010). The number of deaths from the virus was also very low, but not appreciably lower than in some other countries where the vaccination strategy was much more restrictive.

Why, then, did so many Swedes respond to the call by authorities and accept the vaccination? The analysis shows that the number of people who were concerned about the virus was remarkably low. Only one of five Swedes, 20 per cent, responded that they were concerned for themselves, or for the consequences of the virus for Swedish society. At the same time, half, or 51 per cent, responded that their trust in how Swedish authorities were handling the influenza epidemic was high.

When controlled for social capital, the results show that people with high capital, including a specific pattern of media consumption, were characterized by high trust in the authorities, as well as low concern for the influenza. Also, this was the group with the highest vaccination willingness.

People with low social capital, and another type of media consumption, showed a reverse pattern. Among these people, trust in the authorities was lower and their concern for the virus was higher than average. Their vaccination willingness was also lower.

An explanation to these findings could be that people with high social capital belong to the same social

groups as representatives of government agencies and professional representatives such as doctors, or are closely affiliated with them. When these types of specialists express their views in the media, their messages are essentially believed – that the virus could be dangerous, and that vaccination will reduce the risks. This is, in fact, a natural reaction for many of the people in this group.

Other social groups do not show the same trusting behaviour. They are not part of the system in the same way, and they perceived the media's messages to a large extent as sensational and relatively frightening. They feared the virus but also the side effects of the vaccine, which may have led to a reduced willingness to vaccinate.

Accordingly, one conclusion is that in terms of willingness to vaccinate, trust in the authorities had a greater effect than concern for the virus and its consequences.

Another conclusion is that the media's alarmist reporting – especially about the dangers of the illness and the side effects of the vaccine – only had a limited effect on people's anxiety, and primarily then among people with low social capital. The wider majority were unconcerned.

Yet, media reporting seems to have impacted vaccination willingness positively. Because no media, with one single exception, fundamentally questioned the decision by authorities to vaccinate the entire population, the authorities were given interpretative prerogative for the influenza problem (cp Entman 1993, Scheufele 1999, Callaghan & Schnell 2001, McCombs 2005, Weaver 2007). How authorities described the threat and its consequences for individuals and society as a whole, and their solution to the problem – mass vaccination – created a framework for the picture of the influenza virus that the media conveyed to the public. When the responsible authorities and the majority of medical expertise unanimously and concordantly claimed that everybody should accept vaccination, to protect themselves and in consideration for others, it was difficult for the media to find dissenting voices, which is the most common way for news journalism to question or maintain a critical approach to government decisions and directives.

The clearness of the messages entailed that media reporting, although indirect and primarily by not undermining public trust in the authorities, contributed to 60 per cent of Swedes accepting the vaccination even though they were not really concerned about the influenza virus.

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<sup>1</sup> Latvia had the highest percentage in Europe with 13.8 deaths per one million inhabitants; the lowest was Belgium with 1.8. (Situation update in the European Region: overview of influenza surveillance data week 40/2009 to week 07/2010. [www.WHO.int](http://www.WHO.int) April 14, 2010.)

<sup>2</sup> The annual SOM survey (Society, Opinion and Media) has been conducted by Gothenburg University since 1976. Questions about swine flu in the 2009 SOM survey were sent to 3,000 people, and the response frequency was 60 per cent. The results of this survey and the content analysis have previously been presented in Ghersetti and Odén 2010.

<sup>3</sup> The three largest morning newspapers and the two largest tabloids published a total 1,515 articles; *Rapport* on Swedish public service television and *Nyheter* on commercial television transmitted a total of 313 news features in their main broadcasts, and *Ekot* 16.45 on Swedish public service radio broadcasted 150 features. See Ghersetti & Odén 2010.

<sup>4</sup> Effect measurements show the difference in vaccination willingness between the percentages that in total had high or low social capital; the percentage that in total often or rarely consumed media; the percentage that in total were concerned or not concerned about the virus; and the percentage that in total had a lot or little trust in the authorities.