

VA Barometer 2016/17 - VA Report 2016:4

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More information about the survey can be found at www.v-a.se You are welcome to quote from this report provided that VA is cited as the source.

SWEDES COMMITTED TO RESEARCH

These are some of the results of this year's VA Barometer:

- Confidence in researchers is rising but has weakened.
- In the wake of the Macchiarini affair, confidence, predominantly in medical research, has been affected.
- The Swedish public is generally interested in research.
- There is, among many Swedes, a vague conception of several research fields, particularly the humanities.
- *Human being, language* and *humanism* are common associations with the humanities.

The VA Barometer is based on around 1,000 telephone interviews with a representative sample of the Swedish population aged 16–74. This edition is the 15th Barometer survey since VA was founded in 2002. Read more about the survey on page 30.

LAST YEAR THROUGH SWEDISH EYES

book Life through Quantum Glasses, in which unscientific content is presented Stefan Buijsman aged 20, becomes the Terror attacks in Brussels with three youngest person to gain a PhD in Sweden as scientific. explosions at Zaventem airport and Maalbeek in modern times, graduating in the philosophy metro station. 35 killed and over 300 injured. of mathematics at Stockholm University. Cyber attack shuts Chancellor of Swedish The gene-editing A terrorist attack **Businessman Bengt** tool CRISPR/ down the websites Universities fired due Swedish in Nice during Cas 9 is named nurse and of several Swedish Sjöberg sets up a to being Vice-Chancellor France's National 'Breakthrough national newspapers foundation, donating two at Karolinska Institute at nun. Elisabeth Day celebrations billion SEK to cancer the time of Macchiarini's of the year' by for a few hours. Hasselblad, is kills 84 people and research in Sweden. Science. recruitment. canonised. iniures over 200. 2016 Feb Nov Dec Jan March April May June July Aug Sept Oct Karolinska SVT broadcasts the Coordinated Institute's Malmö University The VA first episode of the terror attacks in Vice-College is **Barometer** The Panama documentary series six locations in Chancellor upgraded to interviews are The Experiments. Papers Paris. resulting in resigns as a the status of conducted. are leaked about the surgeon 130 deaths and result of the 'university'. Paolo Macchiarini at showing how Macchiarini over 350 injured. the Karolinska Institute. prominent UK referendum on The European affair. individuals and EU research whether to leave or **Commission** Expert companies hide remain in the EU Group's Open Science ministers adopt At the UN climate conference in Bacteria resistant money in tax (Brexit). Brexit wins **Policy Platform meets** Council conclusions Paris world countries agree the to a group of last havens using for the first time. The on the transition by a narrow margin. global temperature rise should be resort antibiotics "letterbox" towards an Open group provides advice kept below 2 degrees. are found in Sweden. companies on the transition to science system. Open science.

Controversy around the best selling

CONFIDENCE IN RESEARCHERS RISES

Confidence in researchers at *universities* has strengthened further and increased from 84 to 89 percent, compared to last year.

Confidence in researchers at *companies* also has risen to 60 percent. Confidence in researchers at *research institutes* remains high with no change (83 percent); however, this year, more Swedes have confidence levels that are *fairly high* (49 compared to 41 percent last year) than *very high* (35 versus 40 percent).

This year significantly fewer responded *don't know* (see the inset diagram). This indicates that it has become easier to take a position on the question. The decrease in *don't know* responses partially explains the rise in confidence. High confidence amongst young people, aged 16–29, also contributes to the increase.

The graph shows the percentages that have **fairly** or **very high** confidence in researchers. (Four-point scale: Very high, fairly high, fairly low, very low.*) NUMBER OF RESPONDENTS: 1,023



CONFIDENCE PRIOR TO & AFTER MACCHIARINI

In order to investigate whether the Swedish public's confidence in research has been affected by the high profile Macchiarini affair, an ad hoc survey of confidence in researchers was conducted in February 2016. The survey showed that confidence remained high, but had weakened due to an increase in those who had *fairly high* rather than very high confidence.

This difference is still partly visible in the results of this year's VA Barometer; significantly more Swedes have fairly high confidence in university researchers compared with last year (see graph). The exception is *company researchers*, for whom the percentage with *very* high confidence increased in each of the surveys undertaken in 2016.

The graph shows the level of confidence in researchers at universities, according to three different surveys: in Sept/Oct 2015, February 2016 and Sept/Oct 2016 (four-point scale: very high, fairly high, fairly low, very low.) OF RESPONDENTS: SEPT/OCT 2015 = 1,011, FEBRUARY 2016 = 1,000, SEPT/OCT 2016 = 1,023. AVARY SURVEY WAS CARRIED OUT BY TNS SIFO, ALSO VIA TELEPHONE INTERVIEWS



THE EFFECT OF THE MACCHIARINI AFFAIR

The past year's events surrounding the doctor/researcher Paolo Macchiarini's research and trachea operations attracted a lot of media coverage. Therefore, in this year's VA Barometer, the final question asked respondents whether they were aware of the media reports and, if so, whether it had affected their confidence.

80 percent of respondents had heard of Macchiarini. The fifth of the population that had not heard about Macchiarini, consisted mainly of young people. Among those aged over 60, a total of 94 percent were aware of the Macchiarini affair.

The graph shows the percentage of each age group that says they were **aware of media reports** about Macchiarini.

NUMBER OF RESPONDENTS: 16–20 Years = 96 PEOPLE; 21–29 Years = 162 PEOPLE; 30–44 Years = 279 PEOPLE; 45–59 Years = 259 PEOPLE; 60–74 Years = 227 PEOPLE



FALL IN CONFIDENCE IN MEDICAL RESEARCH

As many as 35 percent say that the Macchiarini events have negatively affected their confidence in medical research; primarily this relates to people with only compulsory-level education (44 percent). For one in ten Swedes, the events have also negatively affected their confidence in other research fields. Given the high, albeit weakened, level of confidence in researchers, this result is unexpected.

Age and level of education is clearly reflected in the responses. Most likely the nature of the question also has an effect; you are more likely to feel that your confidence has been affected in response to a direct question, even though you hadn't taken this into consideration previously.

The graph shows how the Macchiarini affair has influenced Swedes' confidence in **medical research**, and in **other research fields**. The question was asked to respondents who had answered yes to the question on whether they had heard of media reports about Macchiarini. NUMBER OF RESPONDENTS: 844 PER QUESTION



GREAT INTEREST **IN RESEARCH**

This year we investigated Swedes' interest in, and their knowledge about, research. In response to the question about their interest, many selected the middle option, 3, on a five-point scale, where I is not at all interested and 5 is very interested. One third selected 4. To the question on their self-perceived knowledge about research, a third selected 3, and another third chose 2 on a five-point scale.

There is essentially a positive attitude towards research in Sweden, which certainly contributes to the high confidence levels. Interest in research appears to be higher than perceived knowledge. See the following two pages too.

The graph shows how the respondents rate their **interest** in, and their self-perceived knowledge about, research. (Five-point scale from I = Not at all interested to 5 = Very interested, and I = No knowledge at all to 5 = Very great knowledge.) NUMBER OF RESPONDENTS: 1,023 PEOPLE PER QUESTION



EDUCATION BREEDS INTEREST IN RESEARCH

The respondents' level of education has a strong impact on their *interest* in, and *knowledge* about, research. Significantly more of the highly educated rate their interest at 4 and 5 on the five-point scale. The highly educated also rate their own knowledge higher than others.

More women than men say they have no knowledge at all about research (17 versus 12 percent). Age-wise, the 30–44 age group say they have the greatest knowledge about research, with ten percent selecting 5 on the five-point scale, compared to between two and five percent for other age categories.

The graph shows how respondents rate their **interest** in, and their **selfperceived knowledge** about, research, according to level of education. (Five-point scale from I = Not at all interested to 5 = Very interested, and I = No knowledge at all to 5 = Very great knowledge.) NUMBER OF RESPONDENTS: LO23 PEOPLE PER QUESTION



SCIENTIFIC EVIDENCE IN DECISION-MAKING

Almost half of respondents believe that politicians do not take sufficient account of what research shows prior to making decisions. Almost half believe that it is not taken into account enough. More women than men (50 versus 42 percent) and more of the highly educated select the option of *too little*.

Those who did not respond *to a reasonable extent* were asked whether there are any particular research fields, where too much or too little consideration is given. *Healthcare, education* and *the climate* were those most commonly named among those who responded *too little* and identified a particular field.

The graph shows the extent to which respondents think that research is taken into account when political decisions are made in Sweden. Response options: Too much, to a reasonable extent, too little or differs depending on the research field.



NUMBER OF RESPONDENTS: 1,023

PERCEPTIONS OF RESEARCH FIELDS

Respondents were asked to say what came to mind when four research fields were named: *the humanities, medicine, social sciences* and *natural sciences*. The word cloud shows the fifteen most common associations for each field. Each field is looked at in more detail on the following pages. The option *nothing in particular* has been removed from the word cloud, as it would otherwise over dominate several of the fields.

The pie charts show the varying percentages that do not have an opinion. Very large differences can be seen between different research fields; nearly forty-five percent of respondents had no idea about *the humanities* compared to just three percent for *medicine*.

The image shows the **fifteen most common responses for each research field** (the question order was randomised), as well as a pie chart showing the percentages that had no opinion. Responses have been slightly reworded and grouped together to create the word cloud. NUMBER OF RESPONDENTS: 1,023 PER RESEARCH FIELD



PERCEPTIONS OF THE HUMANITIES

Forty-five percent of respondents have no understanding of the humanities. This is a significantly higher proportion than for the other research fields. The differences in level of education is striking: 63 percent of respondents with only compulsory-level education have no opinion, compared with 49 percent of those with upper secondary education and 29 percent of those with tertiary education.

The most common association with the humanities is, therefore, *nothing in particular*. In second place, is *human being*, closely followed by *language*. *Language* is a common association among those with a tertiary education.

The image shows the words associated with the **humanities**, as stated by the respondents. The option **nothing in particular** is not included, as it is would otherwise over dominate the word cloud. Responses have been slightly reworded and grouped together to create the word cloud.



PERCEPTIONS OF MEDICINE

The most common association with medicine is *pharmaceuticals*,* followed closely by *research*. Naturally, there a clear connection to health care with *doctor*, *illness*, *hospital* and *medical care* following behind. Despite associations with "the sick", many of the words are positive, such as *good*, *cure* and *to get well*.

There are differences in responses according to level of education. Among those with a tertiary or upper secondary education, words, such as *illness* and *hospital* are more common, while *medicine* is more common among people with only compulsory-level education.

The image shows the words associated with **medicine**, as stated by the respondents. The option **nothing in particular** is not included, as is would have otherwise over dominated the word cloud. Responses have been slightly reworded and grouped together to create the word cloud. NUMBER OF RESPONDENTS: 1,023



PERCEPTIONS OF THE SOCIAL SCIENCES

For the social sciences, the most common association is *nothing in particular*. One in five, compared with slightly more than two out of five for the humanities, do not think of anything in particular in relation to the social sciences. Out of those who responded in this way, 37 percent have compulsory-level education, compared with 19 and 15 percent of those with upper secondary or tertiary education, respectively.

The second most commonly associated word is *politics. Research*, *science* or *university* do not appear in the ten most common words, but follow closely after, which differentiates the social sciences from the other fields.

The image shows the words associated with the **social sciences**, as stated by the respondents. The option **nothing in particular** is not included, as it would otherwise over dominate the word cloud. Responses have been slightly reworded and grouped together to create the word cloud. NUMBER OF RESPONDENTS: 1,023



PERCEPTIONS OF THE NATURAL SCIENCES

A tenth of the respondents have no specific image in their heads, when they think of the natural sciences. This is particularly true for those with compulsory-level education (17 percent). It is still a considerably lower percentage than for the humanities and social sciences.

Among those who provided associations, many think of natural science disciplines, such as *physics* and *biology*. *School*, *research* and *science* are other common associations. *Nature* is the second most common association, after *nothing in particular*.

The image shows the words associated with the **natural sciences**, as stated by the respondents. The option **nothing in particular** is not included, as it would otherwise over dominate the word cloud. Responses have been slightly reworded and grouped together so to create the word cloud.



NUMBER OF RESPONDENTS: 1,023

ABOUT THE SURVEY

The VA Barometer has been conducted annually since 2002. The survey is conducted via telephone interviews with a representative sample of the Swedish population, around 1,000 people (this year 1,023), aged between 16 to 74 years old. Respondents are representative in terms of gender, age and place of residence. The results have been weighted retrospectively to ensure representativeness in terms of level of education. All of the questions were originally asked in Swedish so this report contains a translated version of the original questions.

Interviews are conducted annually over two weeks during September/October and are completed before the yearly announcement of the Nobel Prize winners so they cannot affect the results. For this year's survey, the field period ran from 15 September to 2 October 2016.

Exquiro Market Research has carried out the interviews since 2012. The questionnaire can be downloaded at www.v-a.se alongside the digital version of this year's VA Barometer.

A reference group with expertise in survey methodology helps to formulate the questionnaire. The questionnaire is fixed in consultation with the market research company.

VA (Public & Science) promotes dialogue and openness between researchers and the public, especially young people. The organisation works to create new and engaging forms of dialogue about research. VA is also developing new knowledge on the relationship between research and society through surveys and studies. Its members consist of some 80 organisations, authorities, companies and associations. In addition, it has a number of individual members.



Read more at *www.v-a.se*