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VA Barometer 2015/16 – VA Report 2015:6

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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.

The VA Barometer is supported by:





PUBLIC COMMITMENT TO RESEARCH

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

- Trust in researchers at universities rises again.
- The Swedish public is keen to be involved in research processes.
- Traditional mass media plays a strong role but many Swedes find out about research via social media.
- *Development, medicine, university* and *progress* are words commonly associated with the term *research*.

The VA Barometer is based on around 1,000 telephone interviews with a representative sample of the Swedish population aged 16–74. It is the 14th barometer survey since VA was founded in 2002. Read more about survey on page 30.

LAST YEAR THROUGH SWEDISH EYES

The office of the satirical magazine Charlie Hebdo in Paris is the victim of a terrorist attack and twelve people are shot dead.

The FU's Chief Scientific Adviser Anne Glover steps down and the role is scrapped. Instead, a Scientific Advice Mechanism is set up with seven scientists to work alongside a network of European academies.

Researchers from Uppsala University become the first in the world to capture pain as an image.

A science journalist deliberately publishes a badly designed study to see how it is picked up by the media, thereby fooling millions of people that chocolate helps weight loss.

A researcher at the **Karolinska** Institute (KI) is investigated for alleged scientific misconduct and ethical breaches. The researcher is later cleared by Kl. A long-awaited official government inquiry into scientific misconduct starts in autumn 2015.

World-renowned scientist Stephen Hawking visits Sweden and gives a public lecture on black holes.

A new vaccine against the Ebola virus is tested with promising results.

A scandal at Volkswagen is discovered over nitrogen oxide emissions and its CEO acknowledges that software in its cars has been rigged.

> The science festival Researchers' Night takes place in 26 cities in Sweden and in 300 locations across Europe.

Feb Nov Dec Jan March **April** May June July Aug Sept Oct

The Human Protein Atlas is launched. providing the most complete picture of proteins in the human body to date. The first in a series of Citizens' Dialogues is held in Latvia, in which citizens discuss iobs and growth with EU Commissioners.

Government crisis in Sweden when the rightwing populist party, the Sweden Democrats, votes for the Alliance's budget proposal, resulting in the government's budget being rejected. The crisis is solved by the so-called December Agreement.

Garrissa University in Kenya is attacked by the extremist group Al-Shabaab Around 150 people, mostly students, are killed.

> The worst earthquake in over 80 years hits Nepal resulting in the death of more than 8.800 people.

The Greeks vote against austerity measures demanded by international creditors, which are the conditions for further loans to their country.

Hundreds of thousands of refugees risk their lives on boats in the Mediterranean due to the war in Svria. The crisis leads to great debates and massive voluntary efforts in Sweden.

Scientists at NASA find liquid water on Mars.

Swedish Professor of international health and public educator Hans Rosling lectures a Danish TV journalist and the clip becomes a viral hit.

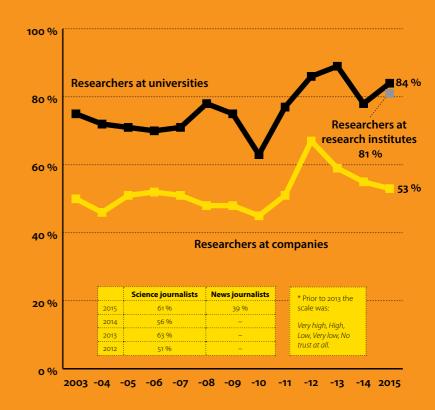
The VA Barometer interviews are conducted.

UN Summit on sustainability held in New York, at which Agenda 2030 and 17 new global development goals are adopted.

HIGH TRUST IN RESEARCHERS

Trust in researchers at universities has risen, while the level of trust in researchers at companies remains the same as last year. This year, we also measured trust in researchers at research institutes. Trust in these is at a similar level to that in university researchers. Fewer this year answered don't know to the question about trust in university researchers (8 percent versus 14 last year). However, the percentage responding don't know is high both for researchers at companies and research institutes, 16 and 13 percent respectively, suggesting that people find it difficult to take a position on the question. We also asked about trust in both science and news journalists, who have an important role in conveying news about research to the public.

The graph shows the percentages that have a fairly or very high trust in researchers, and for science and news journalists. (Four-point scale: Very high, Fairly high, Fairly low, Very low.*)

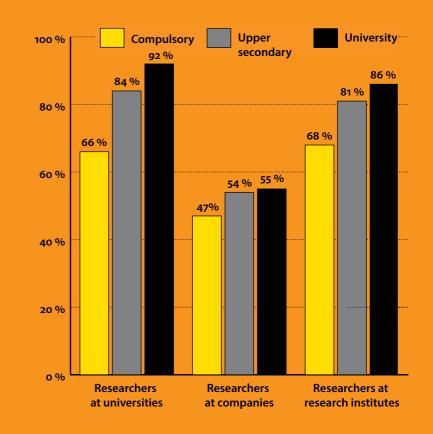


HIGHLY-EDUCATED TRUST RESEARCHERS

Education level is the clearest indicator of trust in researchers. One consistent pattern in our survey results over the years is that Swedes with a higher level of education have a more positive attitude towards research and researchers compared to those with less education. People with only compulsory-level education not only have lower trust but are also more uncertain. In response to the question about trust, they select don't know to a greater extent than others: 24 compared to 8 percent of the population as a whole (universities), 31 versus 16 percent (companies) and 30 versus 13 (research institutes). Even age plays a role: 16-29-year-olds and students are more positive towards university researchers than 60-74-year-olds and senior citizens.

The graph shows the percentages that have fairly or very high trust in researchers, by level of education: Compulsory, Upper secondary, University.

NUMBER OF RESPONDENTS: LOII



SCIENCE MAKES LIFE BETTER

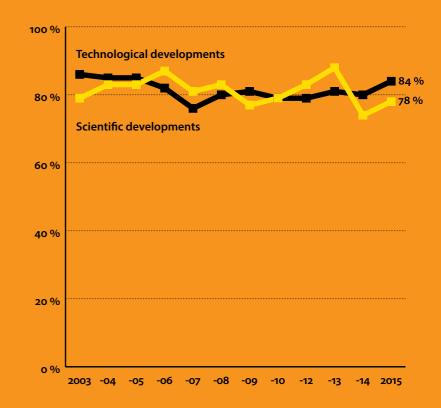
Eight out of ten Swedes believe that scientific and technical developments have made life better for ordinary people.

Last year, confidence in scientific developments decreased, largely due to an increase in the percentage of don't know responses, which was not the case this year.

Over time, these results have been more stable than for the question about trust in researchers. This may indicate that the question to a larger extent captures respondents' attitudes to modern day advances that have been driven by research and technological developments.

The graph shows the percentages that responded **somewhat** or **a lot** better to whether scientific/technological developments in the last 10–20 years have made life better or worse for ordinary people (five-point scale of A lot better to A lot worse). Separate questions were asked to each half of the sample.

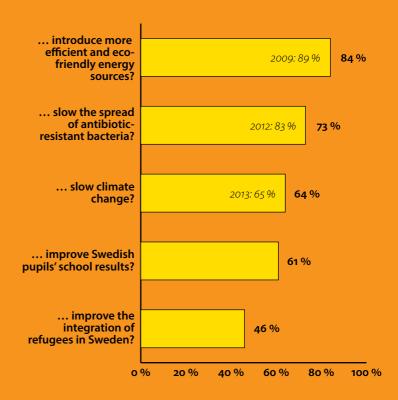
NUMBER OF RESPONDENTS: 504 (SCIENTIFIC) 507 (TECHNOLOGICAL)



VARYING BELIEF IN RESEARCH

Swedes' perception of the potential of research to help solve different societal problems depends largely on the research field. Women are more positive about the potential of research relating to integration, climate change and antibiotic resistance than men (twelve, seven and five percentage points higher). The youngest, aged 16-29, have greater confidence in the potential of research to improve the integration of refugees than other age groups (60 percent compared with 46 percent of the total population). Those with a university and upper secondary education are more negative about research improving school results than those with compulsory-level education: 32 compared with 18 percent answered 'no' to the question.

The graph shows the percentages that answered **yes** to the question about whether they believe that over the next decade there is a good chance that research will help to ... (Choice of answers: Yes or No.)

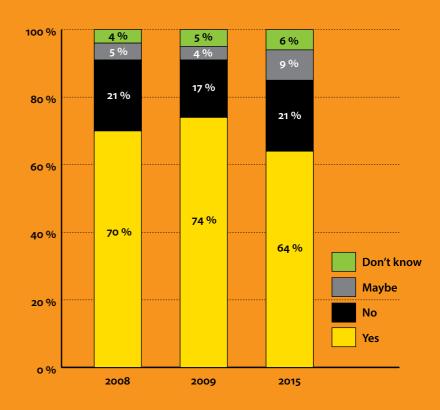


RESEARCH AN **ATTRACTIVE CAREER?**

Highly-educated Swedes, those who themselves work in research, and those who know someone in research believe more than others that research is an attractive career path (10-15 percentage points higher than the population as a whole).

There is clear distinction between those who live in cities and those from rural and tourist regions, with the former being more positive (67 versus 47 percent say yes and 13 versus 37 percent say no). A similar pattern can be seen for people aged 45–59 and the youngest respondents aged 16-29 (77 versus 55 percent say yes, and 16 versus 28 percent say no). More men than women would not recommend the research profession (24 versus 18 percent).

The graph shows the percentages that respond Yes, No, Maybe, or Don't know to the question "Would you recommend becoming a researcher to someone you know?"

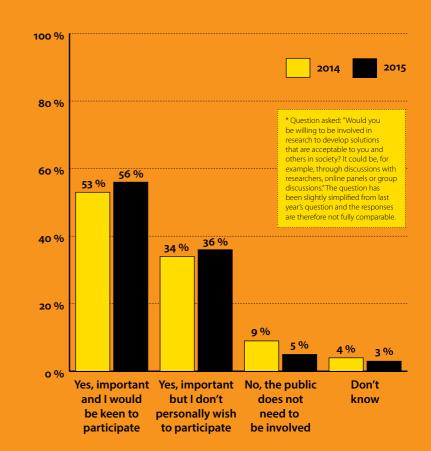


SWEDES KEEN TO **GET INVOLVED**

There is a growing recognition of the need to actually involve those affected in the research and innovation process. In the EU this is called Responsible Research and Innovation (RRI). Nine out of ten Swedes consider it important to involve the public in research and nearly six out of ten would like to be involved personally. Two-thirds of university graduates believe it is important that the public is involved and may themselves consider it, compared with half of those with compulsory-level or upper secondary education. Among those who believe the public should be involved but don't want to participate personally are people living in rural/tourist areas and those aged 60-74.

The graph shows the percentages that think it is important to involve the public in research or who don't think the public should be involved in research, as well as whether they themselves wish to participate or if they do not know.*

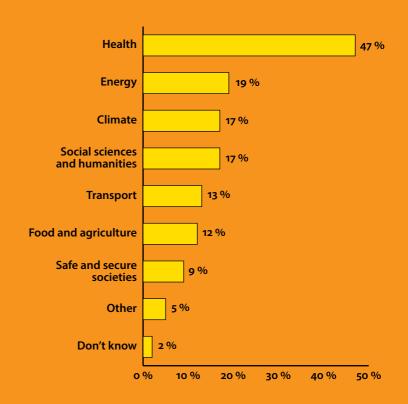
NUMBER OF RESPONDENTS: LOI



WHICH RESEARCH OF **MOST INTEREST?**

Those who are willing to be involved in research (pp. 16–17) were asked to identify one or two areas they would be willing to be involved in. As examples, we selected the seven societal challenges, which are the focus of the EU research programme Horizon 2020, and also included the option Other as an alternative. Almost half of those with a university and upper secondary education selected two challenges. Women are more interested in participating in research relating to health and social sciences and humanities than men. Men are more interested in *energy* and *transport* than women. The difference is about ten percentage points in both cases.

The graph shows which research area(s) the respondents would be interested in being involved in. Up to two areas could be selected.* NUMBER OF RESPONDENTS: 597



STRONG SUPPORT FOR VACCINES

Sweden's universal childhood vaccination programme stems from the results of medical and public health research. Confidence in the programme can therefore be viewed as an indicator of confidence in this field of research. There is strong support for the programme; nine out of ten Swedes would get their own children vaccinated.

It may be noted, however, that a larger proportion of 16-29-yearolds than 30-44-year-olds would not vaccinate their own children (6 versus I percent), despite believing that the vaccines are beneficial. Meanwhile, more 30-44-year-olds than 45-59-year-olds believe that vaccines do more harm than good (5 versus o percent).

The graph shows the percentages that believe that the vaccination programme is of benefit and would/would not get their own children vaccinated, who believe that vaccinations do more harm than good, or who don't know.

Don't know No, do more harm than good 3 % Yes, of benefit but would not vaccinate my own children 3 % Yes, of benefit and would vaccinate my own children 88 %

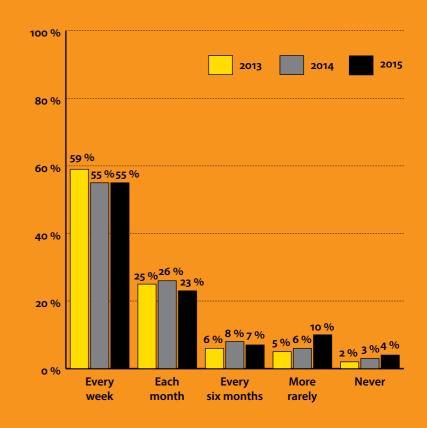
NEWS ON A **WEEKLY BASIS**

More than half of all Swedes access news about research every week. At the same time, more people than in previous years say that they get research news less frequently than once every six months.

Highly-educated people are avid consumers of research news; 68 percent say every week, compared with 43 percent of respondents with only compulsory-level education and half of those with upper secondary education. 85 percent of those who are researchers say every week. No gender differences can be found in the consumption pattern.

The graph shows **how often** the respondents usually find out about research via news on the radio, television, internet news sites or in newspapers.

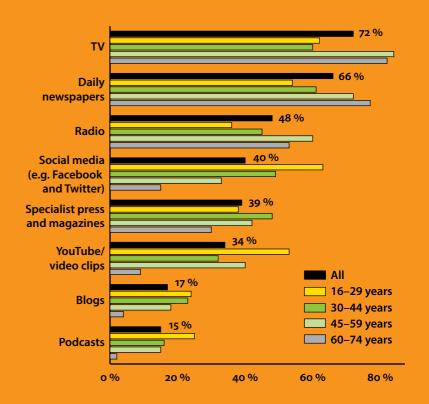
NUMBER OF RESPONDENTS: I,OII



TRADITIONAL MEDIA PREVAILS

For most Swedes, the media of any kind is their main source of news about research and science. Traditional media is most common. Those with a university education listen more to research news on the radio (55 percent) and podcasts (22 percent) than others. Those with compulsory-level education get less research news from social media, YouTube / video clips, blogs and podcasts: 17, 18, 8 and 4 percent, respectively. More women than men report that they get research news via social media (45 versus 36 percent) and blogs (21 versus 13 percent), while more men than women state YouTube / video clips (37 versus 30 percent, respectively).

The graph shows the percentages that respond **yes** to the question about whether they access news about research and science in each medium, including web-based versions. The question was answered with a Yes or No for each channel (on average 3.3 options were mentioned). NUMBER OF RESPONDENTS: 961



PERCEPTIONS OF 'SCIENCE'

We asked half of the respondents to state the first thing that comes to mind when they hear the term science. The other half was asked to give their associations with the term research (see the following two pages).

The most common words were research, knowledge and development. Many of the words selected reflect a hope for the future that many people believe scientific knowledge will bring: future, progress, something new, a better world, and that science is exciting and interesting. Some other common associations were university, researchers, white coats, medicine and facts.

The image shows the words that the respondents first associate with science. Responses containing more than one word (in Swedish) have been reworded and grouped together so they could be reproduced in a word cloud.*

NUMBER OF RESPONDENTS: 465



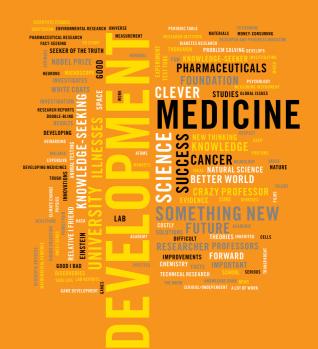
* A word cloud should be considered a graphical representation of the data rather than being statistically representative.

PERCEPTIONS OF 'RESEARCH'

Half of the respondents were asked to state the first thing that comes to mind when they hear the term research. (The other half of the sample was asked to give their associations with the term *science* – see the previous two pages.) The most common words associated with research were development, medicine and science. Words like progress, knowledge-seeking, future, knowledge, and improvements also appear, but research is also considered vague, expensive, poorly paid, and both good and bad. Other associations related to applications of research, such as medicine, illnesses (cancer is most frequently mentioned), as well as to relatives and friends who work as researchers.

The figure shows the words that the respondents first associate with research. Responses containing more than one word (in Swedish) have been reworded and grouped together so they could be reproduced in a word cloud.*

NUMBER OF RESPONDENTS: 483



* A word cloud should be considered a graphical representation of the data rather than being statistically representative.

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 aged between 16 to 74 years old. Respondents are representative in terms of gender, age, place of residence and level of education.

Interviews are conducted annually over two weeks during September/ October and are completed before the yearly announcement of the Nobel Prize winners. The media attention surrounding the Nobel Prize could otherwise affect the results. For this year's survey, the field period ran from 20 September to 4 October 2015. The company Exquiro Market Research has carried out the interviews since 2012. The interview questions can be downloaded on VA's website alongside the digital version of this year's VA Barometer. A reference group with expertise in survey methodology helps to formulate the battery of questions. 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.

