

PUBLIC PERCEPTIONS of science and technology

HSRC RESEARCH OUTPUTS

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In the international context, South Africa has a unique 'fingerprint' of public attitudes towards science, characterised by a complex and shifting balance between positive and negative attitudes towards different aspects of science. Reporting on the results of a module of questionnaire items on the public understanding of science and technology, included in the HSRC's 2010 South African Social Attitudes Survey (SASAS). *Andrea Juan* concludes that demographics, age and educational attainment strongly impact on attitudes towards science.



South Africans display a complex and shifting balance between positive and negative attitudes towards different aspects of science.

Research on science communication and public engagement with science is well-developed internationally. Countries like the USA, India, China and many European countries have employed dedicated science surveys on a regular basis to assess these issues. Similar research is rather limited in South Africa.

The South African government has made a concerted effort to promote science and technology in the public domain. It is important from both an academic and policy point of view to examine the attitudes of the South African public towards science and technology. On this basis a special module was developed for the 2010 South African Social Attitudes Survey (SASAS), conducted by the Human Sciences Research Council. An index of seven items that measured positive (scientific promise) and negative attitudes (scientific reservation) was included in this module. This was the most recent nationally representative and internationally comparable survey.

From the available data we were able to determine the general attitudes of South Africans to science and technology, look at how these attitudes have changed since 1999 (using data from the 1999 Evaluation of Public Opinion Survey), and compare the attitudes of South Africans to those of other countries.

What are South African attitudes to science and technology?

South Africans express rather ambivalent attitudes towards science (Figure 1). For example, 81% felt that science and technology makes their lives easier, healthier and more comfortable; while 73% felt that

Figure 1: Scores on promise and reservation items
Source: Reddy et al (2013)

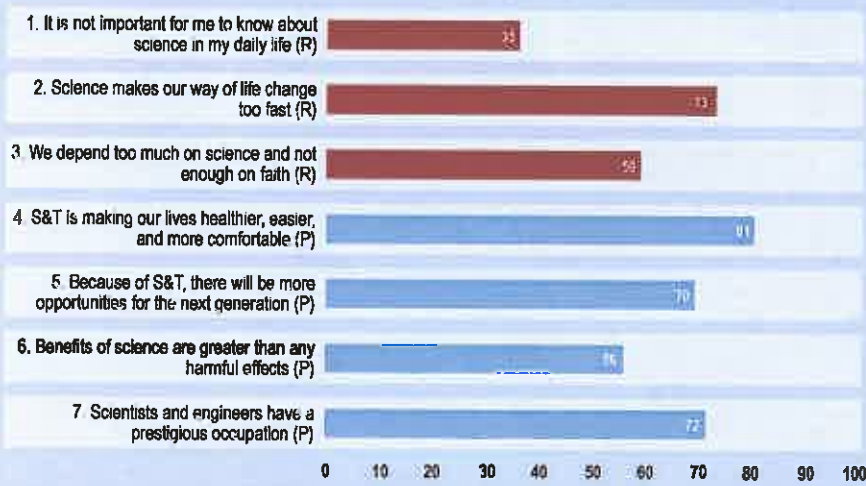
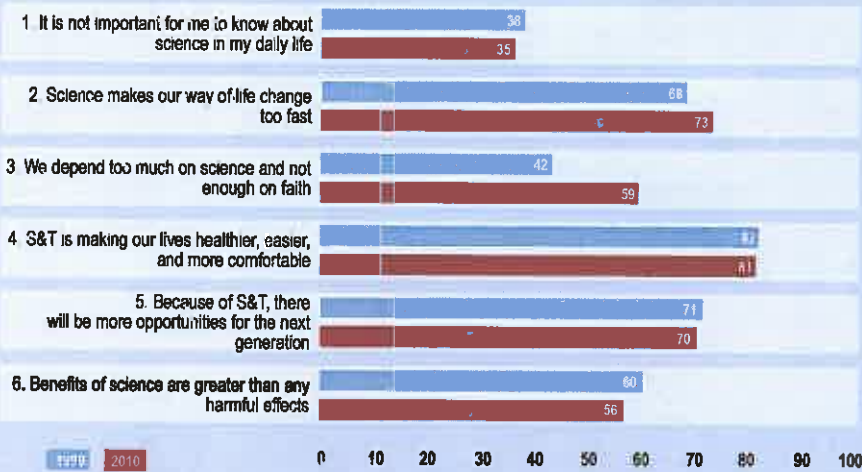


Figure 2: Change in attitudes from 1999 to 2010
Source: Reddy et al (2013)



science is making their way of life change too fast. We found that younger and more educated South Africans have stronger positive attitudes towards science, while the older and less educated have weaker positive attitudes.

Participants who had reservations about science and technology were unevenly distributed. Neither age nor educational attainment had a clear relationship with reservation attitudes towards science. These findings highlight that South Africa's highly stratified society includes many 'publics' with different sets of attitudes towards science and South Africa has a unique fingerprint of attitudes to science.

How have these attitudes changed over time?

The general attitudes to science have changed significantly from 1999 to 2010 and revealed some interesting patterns. There was a slight weakening of promise attitudes and strengthening of reservation ones over this period. The three 'promise' items that included both 1999 and 2010 data (questions 4-6) showed a decrease. This is reflected in a drop in the average promise scores from 73 in 1999 to 70 in 2010.

The first 'reservation' item (question 1) shows a small decline (5%), indicating that South Africans are more likely to think that some science knowledge is important in

everyday life. At the same time there are larger increases to the other two 'reservation' items (questions 2 and 3). This has resulted in an increase in the average reservation scores from 49 in 1999 to 56 in 2010. The statement 'science makes our way of life change too fast' recorded an increase of five percentage points, suggesting that coping with scientific and technological change has become increasingly difficult for the average South African.

Where do South African attitudes on S&T fit onto the global canvas?

We compared South African attitudes towards science to attitudes in Europe, the United States of America and India. The findings show that South African attitudes were closer to European attitudes on four items ('not important for me to know about science in my daily life', 'S&T is making our lives healthier, easier, and more comfortable', 'because of S&T, there will be more opportunities for the next generation', and 'benefits of science are greater than any harmful effects'), closer to India on two items ('science makes our way of life change too fast', and 'S&T is making our lives healthier, easier, and more comfortable') and similar to US on one item ('we depend too much on science and not enough on faith').

This points to the unique 'fingerprint' of public attitudes towards science that South Africans have, characterised by a complex and shifting balance between positive and negative attitudes towards different aspects of science.

This article represents a start to survey research in the area of the South African public and its relationship to science and we would like to develop a dedicated instrument, to be administered periodically, to track the attitudes of the public to science.

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