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TAB

Technology acceptance and controversies over technology - Ambivalence and contradictions: Germans attitude towards technology

Summary

SUMMARY

The present report reflects the main findings of a representative survey carried out on behalf of TAB in February/March 1997 of the German population's attitude to technology. The survey confirms the main findings of the comparative analyses of previous surveys on »technology acceptance«, carried out in the scope of the monitoring project »Technology acceptance and controversies about technology« (TAB 1994).

Concluding that German population is particularly »hostile to technology« obviously did not match the very differentiated replies obtained to questions concerning people's attitude to different fields of technology, to different applications of a technology or to the ecological, economic, health and social impacts and performance of modern technologies.

When questioned as to whether various fields of technology were worthy of government promotion, negative answers only predominated in relation to so-called »large-scale and risk technologies« – above all nuclear energy, genetic engineering and also the field of automation. Areas such as solar energy and medical technology were given very positive evaluations. In all, interviewees were far more sceptical of »large-scale technologies« than of technologies used at work or for domestic or medical use – a picture frequently found in survey research. Even among respondents who state that they had a positive attitude to technology or technological progress, a considerable percentage expresses scepticism of large-scale technology.

When questioned as to their information level or their desire to receive more information on the different fields of technology, it was largely found that only a minority felt that they personally knew enough about a field of technology and did not need further information. However, it also became clear that information campaigns, which are often considered as means of improving acceptance, have not only to reckon with the well known problem that more information does not necessarily generate greater acceptance but rather a higher awareness of the problems involved, but also with disinterest on the part of a considerable percentage of the population – particularly with regard to the politically controversial fields such as nuclear energy and genetic engineering. Moreover, an above-average number of just those persons who tend to reject state promotion of these areas said that they only had a low informational level, but were not interested in receiving more information. Here, the rigid and basic rejection of these technologies seems to manifest itself in disinterest in receiving information.



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The survey on attitude to large-scale technologies indicates a slightly positive trend in the climate of opinion compared to early surveys. This does not apply, however, to genetic engineering. The percentage of people against promoting genetic engineering has even slightly risen. The impression that the climate of opinion is taking a negative turn could be confirmed, by questions on different fields of application for genetic engineering although this could relate to the intensive media reports on the cloning of »Dolly« the sheep at the time of the survey. For the three fields of application touched upon in the questionnaire – release of genetically engineered crops, genetically engineered foodstuffs and gene therapy, there was a clearly more reserved evaluation of the benefits compared with 1992, and a far greater concern about the risks of application. This applies in particular to the application area »foodstuffs«, which as in the 1992 TAB survey on genetic engineering – was identified as the area in which the respondents perceived the least benefits and the most risks, in contrast to the clearly positive assessment of genetic engineering applications in medical contexts.

Both positive and negative evaluations were characteristic of the answers relating to the technology fields »computers«, »multimedia« and »automation«. The respondents' ambivalence – or, perhaps sense of reality – was evident in regard to the impacts on the world of work. A positive assessment of the impacts of computers on the quality of work (relieving from routine tasks) was coupled with a simultaneously negative assessment of the impacts on the labour market situation. On the other hand, the findings indicate that most interviewees in the meantime consider the computer to be a quite positive or objectively useful requisite; nevertheless a considerable part of the population (approximately a quarter) remain quite disassociated both subjectively and probably also objectively (working conditions, income) from this technology. The often-stated hypothesis of the danger of a splitting of the media society seems to be objectively not unfounded. Also the new field »multimedia« seems to be rather irrelevant for large sections of the population. 42% of the respondents stated that they knew little about this field, nor were they interested in receiving additional information.

The basically ambivalent attitude of the population to technology, taking into account both positive and also negative aspects of technology development, becomes particularly visible when the interviewees are confronted with evaluative political statements concerning the impacts and consequences of modern technology. The survey identified overall positive anticipations that technology could help solve environmental problems, the global climate issues, transport problems, and combat diseases. However, this positive attitude goes hand in hand with rather sceptical assessments as to the problem-solving capacity to »reduce poverty and underdevelopment« and »reduce the hectic and stress at

work and in professional life«. Anticipation that technology can solve problems largely triggered off by industrialisation is confronted, therefore, with scepticism as to the impacts of technology on interviewees' own quality of life and its capability to remedy the problem of international justice.

This ambivalent judgement is also evident in relation to the topics »economic crisis and unemployment« and »environment and sustainable development«. A clear majority consider that modern technologies are very important for Germany's status in international competition. But only a minority anticipate that new technologies will solve the present economic and financial crises or reduce unemployment. Rationalisation is also held to be the top-ranking reason for present day unemployment – followed a far behind by factors such as Germany's technological lag vis-à-vis other countries or the German people's hostility to technology. A large section of the interviewees acknowledged both the significance of new technologies for economic policy and also the ecological, economic and societal problems that may be connected with new technologies. More than one third of the respondents who agree with the statement »without new technologies we will forfeit some of our prosperity« also agree with the statement that »the use of technology must be reduced in order to conserve the environment even if this means personal restrictions«. The survey also shows that there is an express interest in processes allowing citizens to participate in technology-policy issues, quite independent of whether the respondents have a generally positive or a negative attitude to technology.

Contradicting findings were obtained on the general (balancing) attitude to »technology as such« and to »technological progress«. The survey asked three balancing judgement questions used in different surveys in recent years. In this way, it was possible to carry out a time-series comparison, and one indicator showed a clearly negative trend in attitudes to technology. This trend corresponds to the findings of other surveys of recent years, although the characteristics were not so clear. Following a positive trend in the general attitude to »technology as such« in the 80ies, a slightly negative trend has become evident since the beginning of the 90ies – although the overall positive level is high! A second indicator used in the TAB survey, however, indicated a clearly positive trend in attitudes to technology in recent years.

Consequently, some basic questions of methodology should be given greater attention when implementing and interpreting surveys in future. For example, the influence that the institutes »stamp« has on the result of surveys should be taken into account by having a survey implemented in parallel by several institutes (the balance judgement indications used in the TAB survey were used by different in-



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stitutes over recent years). The attempt to statistically analyse the content of the contradictions between the indicators suggested that, depending on the wording of the question, the respondents associated different aspects and problems with »technology« as such. For the indicator which pointed to a more positive trend in the climate of opinion on technology (when interviewees were questioned as to the “consequences« of technology) answers were characterised by aspects such as the confidence in experts and significance of technology for the lived world. On the other hand, for the answers which pointed to a negative trend (when people were questioned as to their »personal attitude to technology«) the economic significance of technology in today’s economic crisis seemed to be the decisive factor. Once again, these findings show the problematics of carrying out an ad hoc interpretation of survey findings on technology acceptance in the sense of a »quasi plebiscite« and the need to supplement standardised surveys by qualitative analyses.

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