

Supporting interdisciplinarity: the Andrea von Braun Stiftung

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To understand the thrust and aims of the Andrea von Braun Stiftung (Foundation) one needs to go back to the year of its establishment, 2001. There were several founders at the time who shared two things: a reasonable inheritance, and that one idea widespread among donors of wanting to 'give something back', to society for the decent, challenging and safe environment in which they were brought up, for their personal fortune that granted them the opportunity to become donors in the first place, or simply in recognition of the things that had gone right in their lives. The founders differed, however, in their personal preferences for the causes to be supported by the new foundation. Most of these preferences were incompatible. For example, one of the founders is an astrophysicist and more concerned with the natural sciences than other areas of knowledge. Another is an artist in the field of information technology, with a major interest in questions of design and training, particularly in the new media. A third works in the area of problems of the developing world and was more given to supporting advances in organisational, legal and economic tools for sustainable development.

Attempting to accommodate all these – and more – aims at the same time would have been difficult if not impossible. Given that there were only limited funds, pursuing everything or simply too much would in the end have led to the successful pursuit of nothing. In this situation the following idea arose: Instead of supporting a specific discipline or field of endeavour such as quantum science, folk music, peace research or urban studies, why not focus on the process of interaction of various and different disciplines?

Two things, above all others, made this idea attractive. First, while school curricula, teaching, fundamental research, academic training, university budgets and organisations are all structured along disciplinary lines, problems and questions tend to be inherently interdisciplinary. One can think of almost any issue that a modern society might grapple with, such as global warming, unemployment, crime, traffic, health, fundamentalism, energy, ageing, education, safety, the environment, and one will be unable to identify one single discipline to turn to that could resolve any one of them. These issues have simply too many facets related to different fields of knowledge that need to be considered. Second, and just taking the history of Nobel prizes as an example, it soon becomes clear that interesting and unexpected things can and do happen when two or more disciplines interact. The most significant and unexpected discoveries, those great leaps forward, typically occur not within disciplines, but at their fringes or where they border on some other field of knowledge or on those vast vistas of the unknown.

It was in this conviction that the Andrea von Braun Stiftung was finally established. In simplified terms, the Foundation has three primary goals: (1) to enhance the cooperation and mutual fertilisation of different disciplines and other fields of knowledge; (2) to combine varying approaches, mental models and working methods from different disciplines, including the crafts and traditional sources of knowledge; (3) to support dialogue between disciplines.

Or to condense these goals even further: the Andrea von Braun Stiftung seeks to reduce the barriers between disciplines.

In addition, the founders added a few constraints and requirements. First, projects supported by the Foundation should if possible not stand on their own, but act as door-openers or innovative ideas that would lead to further projects based on the same fundamentals. As the founders indicated, 'Open a window, show that there is potential out there, and move on when things achieve a broader scope and are beyond our financial means.' Financially, as far as possible and in the interest of implementing larger projects, cooperation with larger charities is actively pursued. The Foundation has an explicit 'open-door' policy, i.e. anybody (not only academic researchers) can apply for support and will receive due hearing. The founders were also keen that the charity should have high visibility, lean management and minimal operating costs, and short turnaround times.

IMPLEMENTATION

Starting a charity in Germany is no simple thing. There are numerous hurdles to be overcome, legal assistance to be sought, forms to be filled and explanations to be given. In all fairness, in recent years the authorities in Germany have at least tended to be friendly and cooperative and occasionally even helpful to would-be founders. Perhaps the government has realised that in many modern societies the state is financially simply no longer in a position to guarantee all those functions that were taken for granted only twenty or thirty years ago, and that private initiatives are urgently needed to fill the gaps left by overstretched public budgets. It is largely for this reason that the law has recently been changed (though not greatly) to allow for slightly easier establishment of non-profit or third-sector initiatives. Needless to say, this does not mean that the red tape or excessive regulation has evaporated. The regulatory background for charitable foundations still tends to hold to principles that have been well established for some centuries.

The core question in successfully registering a new foundation has always been its cause or purpose, and whether this cause serves the general aim of 'Gemeinnützigkeit', roughly translating as 'the benefit of the public at large'. Thus, trying to establish a foundation that would not be associated with support for one specific field of public benefit like horse breeding, teacher training, peace research or ocean studies, but rather with the spaces between such fields, led to some lengthy and repeated enquiries by the tax authorities who by their nature are always prone to cast a suspicious eye on those who might dare to redirect tax monies to other, doubtless shady and sinister purposes. As a result it took a lot of paper and postage fees, legal counsel and several months of work plus some adjustments in the underlying documentation before the green light was finally lit.

Everything else then fell quickly into place. Among the most important factors was a heavy reliance on all modes of information technology that could be employed. From the outset, the foundation has had no paper forms of any kind. Instead, a comprehensive and user-friendly homepage (www.avbstiftung.de) was launched to offer the necessary answers to all enquiries. Wherever possible, all communication is channelled via the internet. Project information is exhaustively entered in a database. Cost-free VOIP telephony is in the process of being installed. The complete physical paper documentation for the Foundation's establishment and operation fits into about twenty rarely touched A4 files. Everything else is stored on hard disk. All this required an initial investment of about €15 000 in hardware, software and training and has since led to estimated savings of about €50 000 in rent, postage, travel, storage facilities, consumables and so on. The Foundation employs one part-timer for fifteen to twenty hours a week, plus the managing director who works at zero salary.

Similar lean management thinking applied to the structure of the Board that meets twice yearly and decides all applications that have not been turned down by the managing director. Two models were discussed. One was to have a multidisciplinary Board consisting of members knowledgeable at the working level. This was the one later chosen. Thus, the Board consists of three members: a senior physicist working for the European Patent Office, an art historian who manages a technical museum, and a representative of the founding family who is himself an artist. Two further seats are currently unoccupied. The alternative model would have been a Board consisting of top-level representatives from major corporations, Nobel laureates and/or elder statesmen. This might have been achievable, but was rejected for several reasons. If need be, 'big names' can of course open many doors for a budding foundation with far greater ease than can lesser mortals. The disadvantage of big names is that they are hard to get, they tend to have dense schedules with many similar obligations, and they like to travel first class. They would also represent a considerable hurdle for any applicant approaching the Foundation with an unusual idea. The risk of ridicule and a sense of awe do not encourage speculative thinking or concepts. The mid-level Board chosen works eye-to-eye with applicants, it is more easily and locally available, costs very little and has an up-to-date awareness of trends and developments.

PRACTICE

From the very first day the Foundation went live on the web it has attracted a flood of applications. In 2005, for example, the number of applications in the inbox averaged five per day. The range of contents touched upon is essentially limitless and encompasses all areas of knowledge and expertise, including all major academic fields plus numerous traditional and non-Western schools of thought and experience. The breadth and wealth of ideas and applications is fascinating. Obviously this makes judging their quality and relative merits very difficult. No doubt some mistakes have been made, both by the management and the Board. Some projects were probably judged more harshly than they should have been, others turned out not to be as original as the jurors thought. However, the feeling among the Board members is that this presents a small price to pay for the many interesting and unconventional suggestions that have been brought to the attention of the Foundation. As always, a few winners will far outweigh a large number of less interesting cases.

And to the awareness of this author at least, there have been only very few real losers. In a number of cases it has also been possible to redirect applicants towards other more suitable charities.

The Foundation makes clear that its intent is not to pass judgement on questions of research that it knows little about. No Board could be large enough to include expertise on all the areas touched upon. But that is not what the Foundation aims to do anyway. Its intent is on reducing barriers between disciplines, and it is the extent to which a proposed project contributes to this end, not its specific scientific merit, that decides between support and non-support. The Foundation's decision criteria, in other words, are essentially qualitative. Clearly the most important criterion is that of interdisciplinarity, and here the preference is always for combinations of disciplines encompassing fields that normally have only little or no contact with one another, rather than interdisciplinary work involving related or similar disciplines. Thus, an application for a project that touches on physics and biology, for example, would probably not be supported since both fields are natural sciences, use similar tools and methods and their combination essentially already constitutes a discipline in its own right (biophysics). A combination of geology and calligraphy, however, would generate interest. In following this preference the Foundation has supported combinations of ballet and organic chemistry, nanophysics and musical composition, wolf behaviour patterns and linguistics, and information technology and Kiswahili, to name but a few. A listing and short description of numerous other projects can be found on the Foundation's homepage. Further criteria are: creativity/originality, general topicality or relevance, and – which is increasingly important – elegant, clear and simple language.

In addition the Foundation not only passively awaits applications, but also actively suggests work to promising researchers on subjects that are considered useful within the context of the Foundation's aims. Various studies on the problems and managerial issues involved in combining different research cultures and tools in a single research project, for example, have been initiated, financed and actively promoted, some of them in cooperation with other foundations.

Importantly, support by the Foundation comes with two strings attached. The first is that every recipient of funds is required to write a 'learning paper' at the end of their project. In this paper he or she describes the specific aspects of interdisciplinarity involved in the project, what the problems were in combining the disciplines concerned, how these problems were (or were not) overcome, and what general lessons one might draw from this experience. The learning papers need not be long, and typically are only five to ten pages, but they need to be of publishable standard. The Foundation collects these papers and plans to publish them in a book or place them on the web in due course.

The second string is that the recipient must be willing to give a talk on their learning paper at occasional conferences on interdisciplinarity the Foundation organises every few years. At such conferences the Andrea von Braun Prize, worth €3000, is awarded for the best learning paper. The first of these conferences was held with great success in November 2005. The proceedings of this conference will be published towards the end of 2006.

EXPERIENCE

What lessons have been learnt during the Foundation's first four years? To quote some statistics, by the end of 2005 the Foundation had received a cumulative total of about six hundred and fifty serious applications requiring varying degrees of attention. Of these about forty (6%) have been accepted and financed. Total financing so far has been around €350 000. To give an idea of the Foundation's communications volume, in 2005 a total of about nineteen hundred emails were sent or received by this author.

A key factor in the success of any application reaching the Foundation is the quality of the language used. Since everybody, including the most learned of the wise, is a layman in the majority of all disciplines, any application that is shrouded in technical jargon and more or less wishy-washy scientific sounding terms and specialised expressions has only dim prospects. Following Schopenhauer's advice, 'Use common words to say uncommon things', the Foundation requires every application to be submitted in clear, everyday language so that any newspaper reader could understand what the ideas behind the project are and what the expected outcome will be. In addition, short applications have a significant advantage over long ones. Following these requirements is not always easy, of course, and maybe less so if they are written in the generally unambiguous though sometimes cumbersome German language (applications in English are also accepted!), but the Foundation's policy of becoming increasingly stringent in this respect has also given a strong boost to the quality of applications in the last year or two.

So far, a statistical evaluation of the Foundation's alumni is lacking. Nevertheless, at least in the eyes of this witness, some superficial patterns seem to be emerging, perhaps none of which are completely surprising: women seem to take on interdisciplinary work including the professional and career risks this might involve rather more effectively and willingly than men; younger scholars seem to have fewer difficulties crossing the borders between disciplines than middle-aged or established ones – it is only when scientists have become very senior or highly respected that they no longer seem to fear glances across the fence; all of the Foundation's alumni would probably be considered intellectually able, they have lots of ideas and are lateral thinkers; they are also generally (and thankfully) pleasant, humorous, good-natured, fair, critical and open-minded.

PROSPECTS

As an interesting thought experiment in the context of supporting interdisciplinary work, consider a university with a reasonably broad range of academic disciplines, a discipline being defined as a field of knowledge in which one can achieve an academic degree. Assuming these disciplines number a hundred, then a large number of possible combinations of disciplines or theoretical cases of interdisciplinarity emerge. Naturally the exact number depends on various assumptions and requirements (the exclusion of identical combinations $x+y$ and $y+x$, or allowing them if x and y have different weights, for example), but in any case the number is quite high, and rises exponentially with the number of disciplines. It rises even faster if one allows for triple combinations. Obviously, many if not most of these combinations would prove to be dead ends. On the other hand,

at least in Germany and probably also in other countries, no one has ever really looked systematically at promising leads or conceivably interesting combinations of fields of knowledge. In fact, nobody even knows how to identify a promising lead. Who would be in a position to do so on a general level in any case? It seems that the attractiveness of certain combinations of disciplines becomes clear only after the fact. All we do know is that the opportunities are vast and that we have only scratched the surface.

This is not to say that interdisciplinary work is not already being actively encouraged. Quite the contrary, it has become fashionable to carry the word as a label and – in all fairness – there is a good deal of impressive interdisciplinary work on record. Nevertheless, to get a feel for what was actually going on, some time ago the Foundation ran a search for the word ‘interdisciplinary’ in the list of course descriptions of the University of Munich (about forty-four thousand students, twelve thousand academic and non-academic employees, offering a hundred and twenty-four different degrees). Several hundred hits turned up. The most involved department was medicine. However, upon closer inspection most of these cases turned out to be common courses of different institutes within the same or with neighbouring departments, for example combinations like ‘medicine and pharmacology’. The use of the word ‘interdisciplinary’ was in fact mostly somewhat euphemistic.

By contrast, the Andrea von Braun Stiftung is keen to promote a more creative approach to interdisciplinarity. The Foundation is keen (a) to help those whose work does not allow a neat categorisation by discipline, and (b) to develop tools that will help to identify promising interdisciplinary setups plus the associated methods to overcome managerial, cultural, human and organisational hurdles that stand in the way of achieving this goal. Based on its first few years of operation the outlook seems promising. It has received favourable attention in the press, in spite of its limited size, and many applicants who have drawn a blank elsewhere precisely because they did not fit into established disciplinary moulds have come to see it as a financial haven of last resort. All in all it seems, therefore, that there is only very little danger that the Foundation will run out of interesting work to support.

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