Gerard de Zeeuw: models, systems, support and research

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Abstract
In this bio-memo an introduction to, and some background of, the life and work of Gerard de
Zeeuw is presented.

0. Introduction

In 2001 Gerard de Zeeuw turned 65—after working for 37 years at the University of Amsterdam, of which 27 as full professor. In the Netherlands this means he reached the age of mandatory retirement. As he himself asserts, although retirement is obligatory, age is no reason to stop doing what you enjoys and still appear able to do—although not even he will deny there are some benefits to retirement: one no longer has a (disciplinary) boss, and one may extend one's interests to wherever one wishes to go.

This is not to say that Gerard has restricted himself over much during his career—either in his choice of work or in the kinds of people he influenced; directly (students, colleagues, clients), or indirectly in chance encounters. However, it is apparently his nature neither to seek nor allow much space for personal celebration. So his retirement is an important occasion for many people, providing a rare opportunity to celebrate and reminisce about his work, and their interactions with him.

This Festschrift is part of the celebration. The editor invited me to write a piece providing some biographical details, having been myself a close colleague and eventually partner, as a result of which it might be thought that I would have learnt a lot about his past. But this is not the case! The difficulty is that like many creative people, Gerard is not silent about his past, but tends to use personal experiences as a source of anecdote, as a stimulus to telling stories—thereby removing himself from what 'really' happened.

There is a further difficulty: Gerard demonstrates a deeply scientific attitude and instinct. Life and work are strongly intertwined. Some find this disturbing. It means that it is not daily life which motivates him, but the way daily life crops up in inquiry and vice versa. I remember Gerard being interviewed about his childcare project. To the question 'whether he loved children,' he replied that he didn't, but found them fascinating in terms of the problem how to care for their future. The interviewer got very angry!

Others have also become aware of this connection. One colleague, after reading some of Gerard's recent memos, commented that 'You apply your rigorous and scientific mind to a search for what provides strength, beauty, love and democracy'[1]. This comment was not made in the context of the present celebration, but seems, nevertheless, to capture something important. I find it a helpful (and delightful) way to order my story about Gerard, as my (similarly) interpretative theme.

To counterbalance my personal bias in this interpretation, I have added some material concerning the first phase of the research programme he managed and lead in the 1980s and 1990s (in translation: 'Support, Survival and Culture', henceforth SSC, or in Dutch, OOC), the initial task of the Centre for Innovation and Co-operative Technology, or CICT. The text consists of an adaptation

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[1] Je hebt een strenge 'wetenschappelijke' geest die kracht, schoonheid, liefde en 'democratie' nastreeft.   A.P. Boer, personal communication to Gerard (dated 5 November 2001).

of a series of questions and answers which emerged in a commemorative seminar with former colleagues in the programme.

1. Biographical notes

Early guiding experiences

Many of us are interested in the question 'How did we come to be as we are?' The question is difficult to answer, as all biographers know. Firstly, it is not always clear who or how someone 'is.' And, secondly, because saying what made us so often is a bit like trying to account for our physique solely from the food we have eaten. Gerard himself notes that, if there is anything characteristic about him, it is an interest in planning and making choices as an actor, in minimising efforts and maximising effects, in being sufficiently independent to choose or create one's path to travel easily and creatively/constructively.

One might speculate, as Gerard has done, that this characteristic has been shaped by his handicap. He contracted polio at the age of three, and has difficulty walking. The link seems rather vague, as his handicap hasn't stopped him from travelling and even climbing mountains and ruins. Paraphrasing Tom Lehrer, he usually asserts that 'going up is no problem, it is getting down—but, fortunately, that comes later.' Maybe this is what inspired Gerard.

Another link may be a youthful but crucial experience in Indonesia, where Gerard was born during the colonial period (to relatively well-to-do middle class parents and one older brother). He recounts a particularly telling story: as a boy of three he was attacked by a swarm of bees. He remembers consciously deliberating whether to flee or stay and start a conversation with them. He chose the latter. Later, in the hospital, he was aware that the conversation hadn't been a success. But he could recall the choice.

Photos from three phases in Gerard de Zeeuw's life:

| 1939 | 1976 | 2001 |

If independence is important, beauty in the midst of chaos and pain is equally so. Gerard spent part of the Second World War in Japanese prison camps. He remembers relatively little from this period, but much about the beauty of the night sky—which his mother told him he saw when, on occasion, women and children were punished by having to stand in the prison square for some nights and days. He was probably one of the few who actually enjoyed being taught arithmetic during those nights.

Freedom to choose requires that there is something to choose. Gerard's interest ranged widely in his formative years. He fondly and respectfully remembers his Latin teacher in secondary school, Barend Rijdes, but especially a Dutch professor of sociology, Free van Heek, who allowed him access to his personal library and stimulated him to write his first paper—about action. What a surprise! This broadness of interest continued when he became a student throughout his years at the University of Leyden.

When Gerard finished his studies in mathematics and physics at Leyden he felt something was missing. He took courses in statistics, which he believed was practice oriented but at the time concentrated on topics such as measurement theory. Next he studied econometrics (with Jan Tinbergen) in Rotterdam. He then won a scholarship to study an even more 'practical' topic, mathematical psychology. Gerard claims a deep intellectual debt to Patrick Suppes and others at Stanford University.

Returning to the Netherlands, he looked for a job. He likes to tell how, applying for a post, he phoned from the Central Station, only to learn that the person he was looking for was elsewhere. Lacking a dime he asked to be connected to 'anyone'. Two hours later he had lunch with Prof. Johan Barendregt, a clinical psychologist, and had been hired as a consultant in statistics and methodology. Small events may lead to big changes, as Gerard likes to illustrate using a fund of similar anecdotes.

Later guiding experiences

The years in clinical psychology, with the dual emphases on helping and acquiring knowledge even when this appears impossible (often in principle) proved very important. Gerard experienced this impossibility as a profound challenge, rather than a reason for lamentation. He started to ask himself, continually. what resources and knowledge were available or might be brought to clients—as well as therapists—which would provide strength or solace democratically. Such knowledge would support people becoming actors (bestow actorship) and create co-ordinated collectives.

This question has remained a basic concern over the years, from the time his career in psychology to his later one in Andragology. Andragology (the discipline of human action—from the Greek) combines interests both practical (adult education, social helping, support through the built environment) and theoretical (the acquisition of supportive knowledge). In terms of the breadth of this definition, Andragology, as a field, remains more or less unique to the Netherlands.

Although a new field, Andragology survived the Dutch Government's educational budget cuts of the mid 1980s, but not as a distinct department in the University of Amsterdam. Instead, Gerard was the beneficiary of a large subsidy for further development (see later). Some of the results of the ensuing project are described below. The Centre for Innovation and Co-operative Technology still exists, concentrating on the development of support systems—systems accessible to all, providing resources for activities defined both widely and narrowly.

The literature shows that many people are aware of the detrimental effects scientists may have—for example by choosing certain topics for study rather than others, or by applying standard methods to non-standard problems. Examples of areas criticised include work on genetic modification without consulting the eventual users of the results; and the use of models for research the application of which imposes on their integrity. Starting with his Ph.D. on experimental designs that might prevent experimenter effects, Gerard undertook to search for designs that would give users 'a voice'.

We may think of it in this way. Research approaches such as reductionism (usually the bad boy of social science) simply are standard models for action. They are 'designs.' Reductionism is a tool invented to identify observations that 'stand on their own' (see section 2, below), or, rather, that cohere in terms of observation itself. In other words, they create self-similar sense data (data that, in Cartesian terms, both individually and collectively refer to the res extensa rather than to the res cogitans).

Coherent combinations of observations are the product of observers of a special kind in that the latter need no further mention. They are all 'the same' and may be exemplified by anybody. This is what is meant by the notion that results are 'value-free'. That is to say, the observers' psychology, intentions, values and activities need not be communicated from one to another. Being of no concern, they can be anything. This is reflected in the form of the communication. What is called

the language of variables has proved and often still proves sufficient to transmit only what 'stands on its own'.

What Gerard has been and still is interesting in exploring is what happens when observations cannot be combined so they 'stand on their own,' and cannot be transmitted through the language of variables. A major area of exploration is when one distinguishes between observers such as the above and well-delineated collectives of observers that behave like one. Such collectives may be characterised, for example, by members sharing intentions or values, or a special psychology. Especially interesting is when they are self-organising as the result of members or actors interacting.

The combinations that such collectives produce may still 'stand on their own', and be transmitted to other observers by way of the language of variables. But a condition has been added. Transmission is possible only when the collective producing the combinations is able to maintain or recreate itself (and is 'complete'). This again requires the use of a language—one that will differ from the language of variables. It is this use of two languages together that allows 'voice to be given' to users of the results—in particular to those who willing use the (second) language to participate in a collective. This implies either having, or creating, the required intentions or values.

This result extends the 'observational turn' of the 17th century to include the 20th century 'linguistic turn' in scientific methodology, as well as 'improving observations' to 'improving whatever is needed to maintain the required collectives', including values. Gerard never claimed a new paradigm or methodology, however. He sees himself as one in a long chain of researchers, each trying to deal with new challenges. These challenges include the challenge of observation modifying the observed (solved, in part—by statistics); the challenge of observer intentions influencing observations (solved, again in part—by the development of systems research); and the challenge of how observers may 'participate' (also solved, in part—by implementing what Gerard has termed complete collectives 'that survive').

Activities

If it has indeed become possible to accommodate new values through research, then the appreciation and exercise of independence, integrity, strength, beauty, love and honesty are obviously prime contenders for consideration. These are the areas where I think Gerard has been most active, in both the practice and the design of research. He still is, witness his acceptance of visiting professorships in social psychology and management at the London School of Economics, and at the University of Humberside (now University of Lincoln), both from 1994.

His interest in extending research methods to deal with what seems impossible has led Gerard to contribute to and/or participate in many projects. He initiated the Andragological Research Group. He helped establish the Dutch Systems Group, and was a founding father of the International Federation for Systems Research. With others, he initiated the Science Work Group and has co-

operated with many people on a variety of topics, establishing, along the way, a multitude of other (occasionally ephemeral) work groups.

In 1979 he initiated a series of biannual conferences called the 'Problems of …', for example 'Problems of Context', 'Problems of (Dis)appearing Knowledge', etc.[2] The simple formula that has evolved is popular: many social activities supporting intensive discussion. Additionally he has contributed to and organised meetings on Subjective Probability, Utility and Decision Making, mainly during the 1970s, an early interest. He has sat on the Editorial Boards of the Journals of Statistica Neerlandica and Systemica, and was Editor-in-chief of this Journal.

In the above I have tried to present something like a biography by writing about Gerard's thinking and his activities, if not his hobbies. But this might have given a wrong impression. To both me and others he is a person who lives his ideas—he tries to create quality, for example, even when he is intent on 'doing it himself', when he chooses music, when he designs his garden, when reading, when he stimulates others. His eye is on the future, solving problems rather than trying to pin the blame for their occurrence.

2. Support, Survival and Culture

It seems useful to add some insights from Gerard himself, since the above is only my interpretation of his quest for what he calls 'knowledge about knowledge.' These insights are focussed around the large grant given by the Minister of Education to support the programme 'Support Survival and Culture' ('Ondersteuning, Overleving en Cultuur': OOC). It became the originating activity of the CICT. How it was set up is described through a series of questions and answers, together with some commentary.[3]

A. What started OOC/CICT?

Between 1982 and 1985 discussions concerning budget cuts dominated life in Dutch Universities. A partly covert fight developed over who should bear which cuts. This was eventually resolved through the principle of 'last in, first out', despite prior agreements to the contrary. Andragology was the youngest discipline (having been admitted to the Dutch Academic Statute in 1971): the last in.

It was argued that the academic and educational content of Andragology could be integrated into the educational programmes of other disciplines. What proved difficult to fit in was the research element, especially as it had been developed in Amsterdam. A generous grant from the Dutch Government helped to start the first phase (1985-1994) of a unified effort to establish the basics for a theoretical understanding of social support systems.

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[2] For information on these conferences, please, visit the web site :www.cict.demon.co.uk. This site includes a complete list of titles and conference announcements, together with abstracts and details of proceedings.

[3] This section is the result of interviews between Gerard and myself, conducted in Dutch and then restated, translated and edited by myself. Gerard also had a part in the editing process.

B. How was the effort designed?

That societal support services are needed was and is not in doubt. It was much less obvious—both then and now—what processes should determine their construction. Most existing research methods were ineffective, imposing irrelevant restrictions, and also often playing a political role, the extent of which was unknown. So it was decided to focus on the methodology of research into societal support.

An important trigger was the insight that modern research became possible when (in the 17th century) knowledge became separated from intention (or more generally, and later, value). Knowledge became conceived of as able to stand on its own, without political, ethical or economical (authoritative) underpinning. From this it followed that knowledge should be democratically accessible. It also followed that research should restrict itself to the improvement of observations.

This restriction obviously makes any traditional 'discipline of action' impossible. The recognition of this has stimulated extensive searches for new tools. However, Gerard is more interested in tools that are already available, because they have proved their mettle. He used, therefore, a 'reversal strategy' to design the OOC programme. He reversed the 17th century insight into the nature of research. Instead of using the language of variables, producing user-independent or 'value-free' results, the quest became how to permit 'acting' to stand on its own, in its own right. The gist of this enterprise was to do so through the improvement of observations, with the language of variables as an instance of a scientific language dealing with (high quality) observations.

The significance and nature of this reversal may be illustrated through a variation Gerard devised on a well-known and ancient anecdote from India. It goes as follows. There were fourteen wise men. Seven had good eyesight, the other seven were blind. Members of the first group reported to each other observations, which they then were able to compare and improve to the point where they became 'anybody', each able to recognise 'elephants'. Thus, they could transmit combined observations without having to refer to personal characteristics. Their results stood on their own in that other individuals could use them without having to refer to the seven observers. 'Elephants' as a species or class became visible to all people.

The other seven men were unable to make observations, although they could feel and hear. To be able to understand their experiences, they had to rely on reports to each other. This made it difficult or even impossible to identify 'elephants' without also having to provide information concerning their blindness and on the way they had to communicate among themselves. The form of their communication became a precondition to any results they might wish to transmit. Their notion of elephants thus did not stand on its own, at least not within their collective, although it did

externally—to any group that could repeat being blind and communicating about their non-observational experiences[4].

C. How was the reversal operationalised?

The aim of the research programme became to 'construct socially supportive "elephants'' (communication systems, the participants in which could maintain themselves, in order to transmit what would stand on its own), especially those of which the latter would be socially supportive. The interest of the programme, thus, was not (as one might have expected) in the emergent properties of the collective but rather in the emergent properties of its individual members, when each would be free to participate in more than one collective, according to choice.

The results would be (are) shown in how support systems permit their users to communicate, and (thus) create a collective of actors on the basis of a suitable language. Conversely, knowing such a language makes it possible to re-generate collectives, and to maintain them by shaping and modifying the values participants experience while members. These values depend on the language: desirable values are made possible by using an appropriate language.

Whether or not the values a support system supports continue to be considered desirable is a matter for individual choice—unlike the language necessary to maintain such a system. It has been shown, for example, that the values needed to define 'points of experience' include what in Britain is called 'fair play.' Acceptance that this is an improved value is not obligatory: but if one accepts it the support system itself will help to maintain 'playing fair.'

Well-known and successful projects initiated by members or affiliates of CICT include the European Schools Project (Henk Sligte) and the HIV-net (Heleen Riper). Other contributions include the design of support systems in the form of Day Care Centres (Harrie van Haaster), as support to the teaching of mathematics (Marolijn Witte), to co-operation in music (Jacqueline de Jong), to the design of a science museum (James Bradburne), to strategies intended to change the division of labour in families (Sima Nieborg), and others. Mathesis (a computer/internet/schools based mathematics teaching package) is a recent project initiated by Wybe Zijlstra.

D. How does the programme compare to other approaches?

The programme makes use of by now familiar concepts such as: collectives, points of view, negotiation, respect for participants in collectives, the linguistic turn, non-dominance, the need to change linguistic structures or deconstruct. Similar notions characterise post-modernism and also appear in action research. The similarity is, however, co-incidental. It was not intended, nor was the programme designed this way. Nevertheless, it might be argued that the programme responded to

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[4] Similar examples are the story of sailors reporting seeing a mermaid (Mark Twain, *Letters from the Earth*. Crest Book, Harper and Row 1963, p. 126), and how these observations were dealt with in terms of a 'miracle' or 'fact', only later to be recognised as an instance of a 'seal' (while, nevertheless, remaining a 'mermaid' to the sailors). The other example is the long time it took for 'iron' to be isolated as the main 'thing' with certain stable properties.

the same difficulties that gave rise to these and other, similar developments. What makes the OOC unique is that it attempts to make use of the achievements of traditional science, building on them, rather than rejecting them in favour of new, different and fashionable paradigms.

E. How does the knowledge belonging to support systems differ from traditional knowledge?

The difference in general is that the one reverses the other. What, in traditional research, constitutes an improved observation is understood as an improved constraint or value in research on how to construct support systems. Other differences follow from this. For example, support systems 'give voice' to users. They provide 'qualifications', or pre-defined values, to develop users' 'skills' in one or more actions. One may also say that support systems constrain (or decelerate over time) what otherwise remains free. This constitutes the main difference between support systems and traditional knowledge. Support systems may seem to approximate traditional knowledge, when differences between qualifications disappear.

F. Did the programme or its members achieve guru status?

No. The effects elsewhere are not as clearly attributable to a single institution or to any of its members as some might wish. This is not to say that there are no effects, or that the CICT is not well-known or respected. Moreover, outcomes still serve to clarify results and programmes elsewhere, mostly through consultancy, Ph.D.s and co-operative research projects. Furthermore, there are some institutional off-shoots, in the form of (small) affiliated research organisations."

3. Conclusion

I included the answers and questions concerning the OOC programme here because they exemplify Gerard's interests and approach. The design of the programme required intellectual flexibility, as well as strict adherence to criteria for quality. It also demonstrates his concern for action—both his own and others': and a profound, though dispassionate, commitment to knowledge acquisition as the basis for accessible 'strength, beauty, love, democracy.' Gerard apparently likes his and others' environments to be supportive, stimulating and intellectually civilised.