

## “The Theories and the Theorists: Why Theory is Important for Research”

With Børje Holmberg, Michael Graham Moore, Otto Peters

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*Distances et savoirs, fidèle à sa mission de mémoire et d'exploration, a souhaité que ses lecteurs assistent, certes avec bien des distances notamment linguistiques, à une conférence remarquable qui amenait à dialoguer trois des personnalités ayant le plus profondément influencé la recherche sur l'enseignement à distance ces dernières décennies : Børje Holmberg, Michael Graham Moore, et Otto Peters<sup>1</sup>.*

*Pour des raisons pratiques l'ensemble des propos édités sont dans la langue des interventions, seul le professeur Michael Graham Moore s'exprimant dans sa langue maternelle.*

*Le quatrième « atelier de recherche » du réseau European Distance and E-learning Network (EDEN), sur le thème « Recherches sur l'enseignement à distance en ligne et sur le e-learning : créer la différence » s'est tenu à Castelldefels, Espagne, du 25 au 26 octobre 2006. Un des moments mémorables de cet atelier fut la session spéciale à laquelle participaient les professeurs Børje Holmberg, Michael Graham Moore, et Otto Peters, intitulée : « Théories et théoriciens : pourquoi la théorie importe-t-elle pour la recherche » Une transcription spécialement éditée pour Distances et savoirs en est présentée ici.*

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1. Les biographies des professeurs Børje Holmberg, Michael Graham Moore, et Otto Peters se trouvent en fin de texte.

*Cette session était structurée afin que chacun de ces trois représentants majeurs des théories concernant l'enseignement à distance s'expriment sur les questions suivantes :*

*– une première question « qu'est-ce qu'une théorie ? » fut posée, avec la requête que chaque intervenant ne parle pas plus de cinq minutes,*

*– Holmberg, Moore et Peters ont alors exprimé leurs vues concernant leur propre théorie,*

*– il fut ensuite demandé à chacun d'entre eux de faire part de leurs réflexions concernant les implications de leurs théories respectives pour la recherche sur l'enseignement à distance en ligne et pour le e-learning, ainsi que pour le développement des théories dans le domaine de l'enseignement à distance, en évoquant les perspectives qu'ils envisageaient pour de futurs développements. Il ne fut accordé que cinq minutes à chacun pour ces différents points,*

*– les auditeurs furent alors invités à une discussion générale et les intervenants à conclure leurs propos.*

*Ulrich Bernath, ancien directeur du Centre pour l'enseignement à distance à l'Université d'Oldenburg, Allemagne, et à présent Directeur de la « Fondation Ulrich Bernath pour la recherche en Enseignement Ouvert et à Distance » et Albert Sangra Directeur d'EduLab, Internet Interdisciplinary Institute, à l'Université Ouverte de Catalogne (UOC) présidaient la session. Martine Vidal, co-rédactrice en chef de Distances et savoirs, et Ulrich Bernath en ont édité la transcription ; des références ont été ajoutées par les intervenants.*

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The 4<sup>th</sup> EDEN Research Workshop on “Research into Online Distance Education and E-Learning: Making the Difference” was held in Castelldefels/Spain, October 25-26, 2006. A special session with Professors Børje Holmberg, Michael Graham Moore, and Otto Peters on “The Theories and the Theorists: Why Theory is Important for Research” was a memorable programme highlight. An edited transcript of their contributions shall be presented here.

The session was structured. Each of the three outstanding representatives of distance education theory spoke to the following:

– at first the question “What is a theory?” was raised with the wish to not exceed five minutes each;

– then Holmberg, Moore, and Peters provided insight into their respective theory;

– finally each of them was asked to reflect on the implications of their respective theory on research into online distance education and e-learning, as well as the development of theories in the field of distance education with an outlook into future developments. Only five minutes were given to each for reflecting on these various issues;

– in the end the audience was invited for a discussion, and the panellists for concluding remarks.

Ulrich Bernath, former Director of the Center for Distance Education at Oldenburg University/Germany and now Director of the Ulrich Bernath Foundation for Research in Open and Distance Learning, and Albert Sangrà, Director of EduLab, Internet Interdisciplinary Institute, at Universidade Oberta de Catalunya (OUC) chaired the session. Martine Vidal, chief editor of *Distances et savoirs*, and Ulrich Bernath edited the transcript; references have been added by the panellists.

**On “The Theories and the Theorists: Why Theory is Important for Research” with Børje Holmberg, Michael Graham Moore, and Otto Peters**

*The 4<sup>th</sup> EDEN Research Workshop on “Research into Online Distance Education and E-Learning: Making the Difference” was held in Castelldefels/Spain, October 25 – 26, 2006. A special session with Professors Børje Holmberg, Michael Graham Moore, and Otto Peters on “The Theories and the Theorists: Why Theory is Important for Research” was a memorable programme highlight. An edited transcript of their contributions shall be presented here.*

**1 - At first the question “What is a theory?” was raised with the wish to not exceed five minutes each**

**Børje Holmberg on “What is a theory”**

Scholarly theories imply a systematic ordering of ideas about the phenomena of our field of inquiry and are usually of two kinds. One is concerned with understanding, the other with explanation and prediction. Basically Moore’s and Peters’ theories are of the former kind, mine of the second.

Peters regards distance education as an industrialised type of teaching and learning. He has shown that it is characterised by rationalizing, division of work between several cooperating people, mechanising, planning, organisation, production-line work, mass production etc. This is his description and understanding of distance education.

Moore regards transactional distance as the generally descriptive feature of distance education, on the basis of which distance education functions. ‘Transactional Distance is the gap of understanding and communication between the teachers and learners caused by geographic distance that must be bridged through distinctive procedures in instructional design and the facilitation of interaction’ (Moore and Kearsley 2005 p. 223). Here again we have a theory attempting to describe and understand the concept of distance education.

My theory is of a different kind. It implies that the application of a methodological approach - empathy-creating conversational style – leads to increased motivation to learn and better results than conventional presentation of learning matter. This is a predictive theory that generates inter-subjectively testable hypotheses which can be – and have been - empirically tested (Holmberg B., Schuemer R. and Obermeier 1982, and Holmberg B. 2003)

This is not to say that Moore's and Peters' approaches are devoid of predictive elements or that mine does not contribute to the understanding of distance education. Nevertheless it places our theoretical approaches in their basic categories. These categories were, as far as I know, first identified by Droysen in 1858 and later described by Wilhelm Dilthey (cf. Bollnow 1967).

### **Otto Peters on “What is a theory”**

I should like to answer this question on a more basic line. Quite often it is useful to go back to the etymology of the word. It was already in use by philosophers in antiquity. The Greek word *theorein* meant to look upon, to observe, to consider, to contemplate; and the noun *theoría* meant looking at, looking more closely, observation, consideration, insight and scientific contemplation. The goal of these activities was to ascertain truth. The basic meaning of the word is still valid and underpins most of our modern definition of theory, including the theories conveyed by the members of this panel.

If we examine present-day theories it is easy to see that their general goal is to accomplish an understanding of reality. The possible functions of theory can be indicated by stating that they can be basically descriptive, analytical or explanatory, and to a certain degree predictive as well, and inherently prescriptive. A theory is a unit of knowledge that comprises facts, assumptions and hypotheses. This unit shows how facts can be subordinated to general principles or laws and how they relate to them. A scientific theory must be consistent with the facts, otherwise it is mere fiction. Theories can be verified by experiments or by methodological observation. Usually theories focus on one selected aspect of a phenomenon under consideration. This means that several or even many theories can be constructed dealing with the same phenomenon. The reason for this is that the originators of theories have different purposes in mind, and different outlooks. Hermeneutics can help us in developing a theory as well as interpreting the results of its verification.

“Theoretical inquiry is central to the vitality and development of a field of practice – not to mention its recognition and credibility from those not yet initiated into the field. The theoretical foundations of a field describe and inform the practice and provide the primary means to guide future developments” (Garrison, 2000). It influences practice and research, reveals new knowledge and suggests alternatives.

Let me conclude with two definitions, one is by McMillan and Schumacher (1984, 11): a “theory is an explanation, a systematic account of relationships among phenomena”, and the other by Garrison (2000): a “theory is a coherent and systematic ordering of ideas, concepts and models, with a purpose of constructing meaning to explain, to interpret, to shape practice”.

### **Michael Graham Moore on “What is a theory?”**

In response to the question of what we believe theory to be, I am on record as saying that all that is published in the field, is the theory of the field ... I’ve compared theory to a map. A map summarizes what is known and it shows what is not known. The principal value of the theory, the knowing what is known, for us people who aspire to research, is in so far as the theory indicates the areas for further exploration, for further inquiry. I would go so far as to suggest that without theory there cannot be research; there can be number counting, data gathering, but there cannot be research without theory.

Finally to further illustrate the point as the reviewer of journal articles, I find that the most common reason for rejection is that people provide data without theory, in other words they don’t say what is already known before they describe what they have discovered. It is like going on a journey without a map. Students, unless advised otherwise, are very anxious to go gather data without adequately establishing why that data is important, in other words providing the theory. The theory can be provided through an extensive review of literature or, on occasions, one can refer to a summary that has acquired authority over the years. I would not advise a student to explain from literature why distance education is like an industrial model. He or she need only say “I am going to start off on the basis of Peters’ theory”. Taxonomies are examples of a summary of literature that can be offered as theory. So the theory is the statement of what is known as the prelude for research that is discovering what is not known.

### **2. - Then Holmberg, Moore, and Peters provided insight into their respective theory**

#### **Børje Holmberg on his theory of the empathetic teaching-learning conversation**

I’ll start with how it started. It is a very naïve story, very, very simple. In the early 1940’s I saw a correspondence course in French which fascinated me. It taught the student the simple things that beginners have to fight with in French, for example the order in which the personal pronouns are placed in French: “*je lui ai écrit une lettre, je la lui ai écrite,, je l’ai envoyée, il me l’a dit etc. etc*”. And this was done in such a way that the author made the students follow his presentation; it was a sort of conversation with the student, it was not a teacher talking *to* students, it was a teacher talking *with* students. I thought it was fascinating to see that such a dreary

subject could be dealt with in this way, with what I called a conversational way. That was my first observation.

Then at a very early stage – I mentioned the idea in a book of mine of 1960 – it struck me on the one hand that many distance-education courses were little more than school books with self-checking exercises and recurring tasks for submission to the distance-teaching organisation, on the other hand that the atmosphere and style of helpful face-to-face teaching could easily replace this schoolbook style in the way the author of the French course had done. It is generally accepted that friendly atmosphere, helpful suggestions and encouragement support study motivation and facilitate success. This led me to the very natural conclusion that if we cater for this empathetic approach in distance education the outcomes of the study will improve. The medium used to bring about empathy is normally friendly conversation. This is the very simple background of my theory of teaching-learning conversations in distance education.

Basically the theory implies that what applies to the creation of empathy in face-to-face teaching also applies to distance education – provided special measures are taken to make sure that students are engaged in decision making, that the style of presentation is lucid, problem-oriented and conversation-like, that friendly non-contiguous interaction between students and tutors is brought about and that liberal organisational-administrative structures and processes are created.

This appears evident, doesn't it? Every educator knows that a friendly tone is conducive to good learning. So why on earth point it out? A study of existing pre-produced distance-education courses and of the practice of 'correcting' assignments submitted shows clearly that there is every reason to point out the advantages of empathetic conversation-like presentations and student-tutor interaction. The regrettable fact is that still very many, probably most, distance courses have little of this conversational character. Too often they are merely handbook texts and the interaction with tutors consists mainly of correction and little teaching or explanation.

Naturally at academic and similar levels students have to read difficult and complicated scholarly presentations. There is no reason, however, why these should be distance-education texts. Such presentations are available on the market in book form. By distance education we can provide empathy-supporting, conversational guides to the study of these difficult scholarly texts and thus help students to study them. That is a parallel of what is done in traditional teaching. Full explanations, relevant examples, useful comparisons etc. given in a helpful and friendly way should, I think, alleviate and guide the study. This is what is done by a good lecturer in traditional teaching. Why should we deprive distance students of this kind of learning support? It can be provided in print, online or by speech in recorded form.

At elementary levels the whole of a course can be – and in my view should be – developed as a conversation, preferably of a Socratic type, to help students reach their goals. Here we have a good correspondence course like the course in French that I mentioned as our model.

The friendly atmosphere is essential also in the interaction between students and tutors. Helping (teaching) students is the main purpose of this interaction. This naturally means teaching, explaining and providing examples etc. Awarding marks (grades) is only a possible secondary part of the tutor's work.

My modest theory simply means that a procedure that has proved helpful in traditional education is applicable also to distance education. Empathy between those who teach and those who learn is universally a good basis for learning. Easily understandable, conversation-like presentations and friendly interaction help students to learn. Empirical investigations support these assumptions.

This theory of mine has been much discussed, as far as I know not rejected, but received with varying degrees of enthusiasm (cf. Keegan 1993 and later editions). Among those who are little enthusiastic I count my two respected fellow presenters in this debate.

### **Otto Peters on his theory of distance education as the most industrialized form of education**

At the beginning I should like to express my feelings of disappointment and sadness. You may be asking yourselves why this is. It was only the other day that I read an article written by D. Randy Garrison (2000), a well-known distance education expert. In it, he characterizes "Peters' industrial model" as an organizational model, saying that it is about organizing the educational process to realize economies of scale. After 50 years of discussion I am still misunderstood in such a massive way.

I should like to explain my emotional reaction by telling you something about the genesis of this theory. The irony of Garrison's statement is that I am a pedagogue, and not an expert in organization. I was a pedagogue in the 1960s when I tried to analyze educational approaches. In doing so I came across what was called at that time "correspondence education", a form of education that was ignored by educationists and the scientific community. I was not involved in correspondence education myself, it was only my scholarly interest as a pedagogue that induced me to see what was happening in this peculiar form of education. I tried to analyze and describe it by applying those pedagogical criteria that were used by pedagogues at that time. This means that I analyzed it with regard to objectives, content, methods, and media as well as to students and teachers. When I had finished I was extremely dissatisfied. My mistake was that I had applied criteria developed for face-to-face instruction in schools and at universities. Consequently distance education appeared merely as a special form of classroom teaching. I had the feeling that this interpretation did not do justice to this entirely different form of teaching and learning, and looked at it more closely in order to find out characteristic differences between the two forms of education.

After studying the teaching and learning at correspondence schools, correspondence colleges, at UNISA, at European and U.S. universities, and at universities of the former Soviet Union I found that all of them had something in common: their teaching and learning are highly “industrialized”. No one had realized this then. Even worse, I was to learn that there were even experts who not only ignored but also tended to deny this characteristic feature of distance education. Therefore I tried to convince these experts

- that distance education is a form of teaching and learning that sprang up and developed only in the industrial age and is an expression of industrialization, whereas classroom education represents a pre-industrial (artisan) form of teaching and learning,

- that the first owners of correspondence schools were entrepreneurs who found it adequate and profitable to apply methods of the industrialization of goods to teaching and learning,

- that there are about ten formal criteria that the two processes have in common, among them division of labour, use of technical media, mass production and rationalization,

- that a thorough analysis of this theory shows several dimensions: historical, cultural, sociological, anthropological, economical and educational.

All of these descriptive elements suggest that this theory is well-grounded.

My main point was to show that such an entirely different structure of education requires new and unique learning and teaching behaviors. This is a genuine pedagogical aspect. It is important to become aware of it. I intended to show aspects so far unknown in academia. Why can education be distributed to many students who live apart from each other, and why can education be mass-produced and distributed everywhere? These are things that were very challenging and educationally of great importance. I became aware of a downright revolution in education, not noticed up to then, and my theory wanted to point to this extraordinary development.

Let me explain this theory further by referring to two presentations at this workshop. Børje Holmberg referred to ten criteria that the production of goods and the production of education have in common, among them division of labour, use of technical media, mass production, rationalization, the use of scientific approaches and scientific methods. Betty Collis demonstrated in her keynote speech how much scientific knowledge and how many scientific methods are used in order to secure the quality of distance education. The application of scientific knowledge is relevant for the development of industrial production processes.

I should like to point to aspects of the theory that have been completely ignored. “Industrialized education” not only means what I have just described, it means much more. Distance education is a product of the industrialization of society. Only “industrial man” was able and willing to study at a distance, in the same way as

“post-industrial man” is able and willing to study in online learning. The change of the very nature of knowledge is a product and consequence of industrialized learning. The emergence of entirely new forms of learning in online learning is another result of this development. My theory focuses on these radical changes, which had never been seen and experienced before. I am interested in these significant pedagogical changes, and not in organizational issues. If you have ever looked at the table of contents of my book, *Distance Education in Transition* (Peters, 2004), you will see that all articles deal with pedagogical issues that became significant because of the industrialization of education and they do not deal mainly with organizational strategies.

Why is it adequate to interpret distance education by applying this theory? It helps us to understand the reality of learning and teaching at a distance. It raises our awareness of its specific character, the essence of this form of learning, and of the social processes on which they are based. It is now crystal clear that this form differs from all pre-industrial forms of learning and teaching, it relates distance education to the history of learning in a special way, to the world of industrial production, to commercialism, consumerism – and to the humanitarian mission of distance education. It helps us to imagine possible future developments of learning.

The theory was conceived in the middle of the 1960s and first published in 1968 (Peters 1968, 1973). German scholars clearly did not appreciate it as they were not familiar with distance education and its specific problems at all at that time. But what was more important: they were seized by the 1968 students’ movement, which focused on the emancipation of *traditional* students from suppression by academic hierarchies. They felt that social processes cannot be planned and calculated at all. They rejected the use of technology in general, but especially in teaching and learning. There was no response from German-speaking educators.

The first English description of the theory was published by Mackenzie and Christensen (1971). Sewart, Keegan and Holmberg (eds.) (1983) published a translation of the respective chapter of my book “Die didaktische Struktur des Fernunterrichts” (The Pedagogical Structure of Distance Education) (Peters 1973). Keegan’s book “Foundation of Distance Education” made a lasting impact on distance educators. In it he devoted a whole chapter to the industrialization of distance education (Keegan, 1986) and discussed it at international conferences.

At that time, the theory was especially convincing to experts who were involved in establishing open universities in the 1970s and 1980s. These new universities combined technical, organizational, management and pedagogical innovations. Open universities appeared to be the empirical proof of the theory, as they are the most industrialized distance learning institutions. Keegan (1994) reinforced this impact by editing a book that carried selected and translated writings of this author. It is subtitled “The Industrialization of Teaching and Learning”. In subsequent years his strong impulses in the literature provoked animated international discussions. Since then the theory has been dealt with in all scholarly books on distance education and is included in many

digitized MA courses on Distance Education, the last and most striking example being the virtual MDE course “Foundations of Distance Education” jointly offered by the University of Maryland University College (UMUC) and the University of Oldenburg.

### **Michael Graham Moore on his theory of transactional distance**

Historical perspective: I went to Africa in 1963 after three boring years as a high school teacher in England. I asked my boss what my job is going to be, and he said my job is to do the education of adults, and if no one else is doing it, you can do it. I had a quarter of Kenya and nobody else was doing it, so I did. That is where I discovered the power of radio, and I discovered correspondence education. I decided to mention correspondence when I heard Dr Otto Peters’ a few minutes ago emphasis on correspondence. That’s also where I began.

In 1965 I spent a month on board a ship coming around the Cape of Good Hope writing a correspondence course. That led me into contact with one of the great American university correspondence schools. And through that I ended up going to the U.S.

When I did my doctorate in education in the U.S., I found that in the literature there was virtually nothing about the pedagogy of what we then called correspondence education, or the teaching and learning through the radio, which in Africa I had found to be such a powerful medium. So I began to do research on this same phenomenon of when people are at a distance as we now call it, but we did not then: What’s going on, on the part of the learners and on the part of the teachers. Now I suppose I am a bit biased because it was more on the teaching than on the learning side then, now of course the two are separable.

I gave a presentation in 1972, Dr. Holmberg was then the vice-president of ICCE [International Council for Correspondence Education] and that was my coming out party. I gave a presentation on what I had done in the two years previously. I defined what happened in a classroom as “contiguous teaching”, and I defined distance teaching. I defined “distance teaching” as “instructional methods in which the teaching behaviors are executed apart from the learning behaviors, so that communication ...must be facilitated by print, electronic, mechanical, or other devices” (Moore 1972).

I said we need a theory in the English language, we did not have a theory, it was not in the literature and I identified the macro factors, which was the terms that I discovered in my study of comparative education, which at that time was a growing field also. So we need to describe and define and discriminate between the various components of this field

To illustrate the theory of transactional distance, I am building on a presentation by Marrily Stover (UMUC). She has described what I did then, -- which was looking at a large sample of what were called American independent study programmes, delivered through various technologies.

### First steps

Moore started by gathering a large sample of “independent study” programs. These included programs delivered by:

- TV and radio
- Correspondence
- Programmed instruction
- Computer-assisted instruction
- Telephone
- Dial access audio tapes
- Independent learning on campus

I had classified them according to the extent to which there was individualisation on the part of the student. I then conceived the idea of constructive interaction, but one of my advisors did not like me using the word interaction for reasons I can't go into, but dialogue is essentially constructive interaction between teacher and learner, so I classified these programmes, although here it shows technologies, typically programmes delivered through one technology tend to fall into a cluster above or below those or another, although in reality they would also be considered overlapped.

He classified them by the extent to which *generally* the learning program was individualized

More individualized programs were usually:

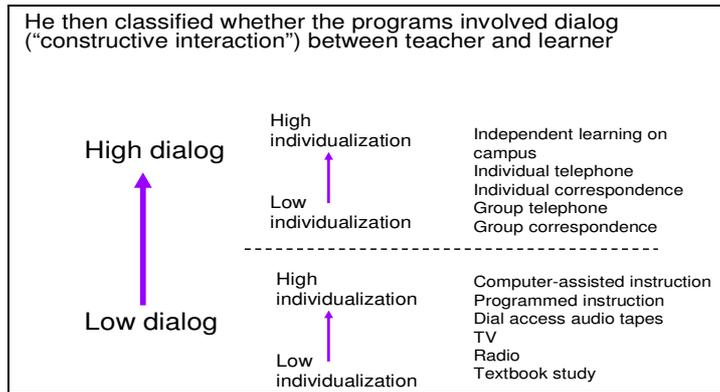
- Correspondence
- Programmed instruction
- Independent learning on campus

Less individualized programs were:

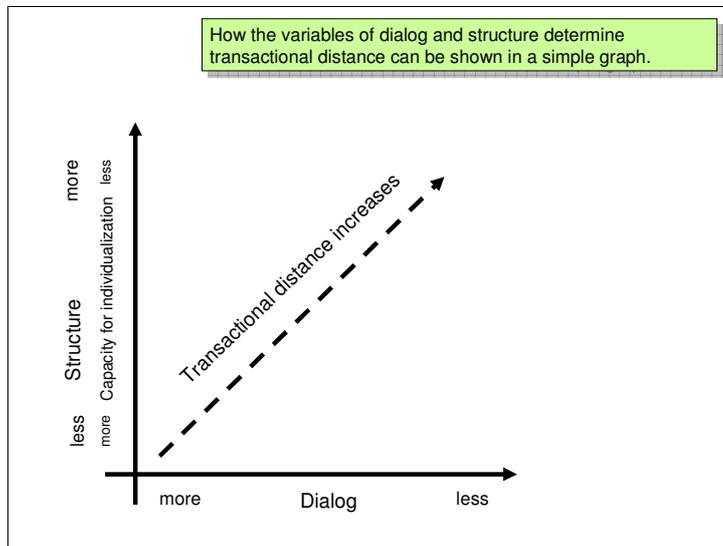
- Computer-assisted instruction
- TV and radio
- Telephone groups
- Dial access audio tapes

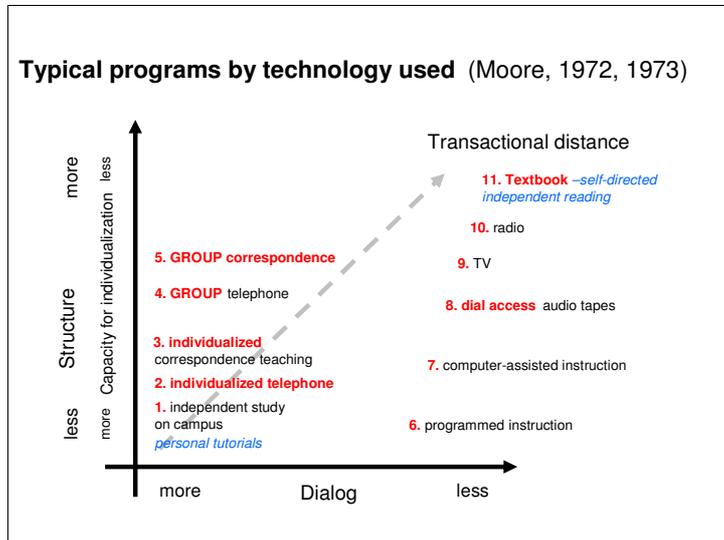
It broke about something like this. And bear in mind, this analysis was of over a thousand documents describing programs before we had computers, so I had the help of a librarian, and bless her I don't know where she is now. She helped me organise all these cards, with all the data on, and we came up with this kind of classification of these programmes according to the extent to which they had this phenomenon of a dialogue and structure. The more structured being the less individualised, and the

less structured vice-versa. These are continuous variables, these are not discreet packages. A programme has more dialogue or less dialogue, not either or, or the other. To put it on a graph it looks like this:



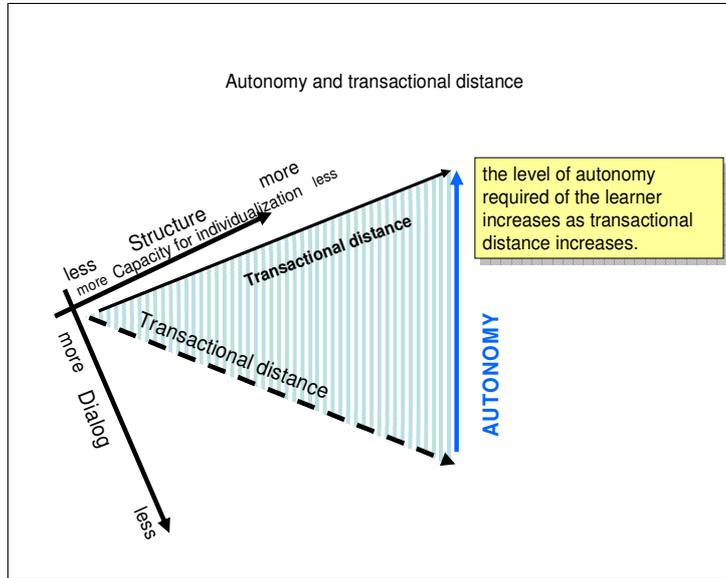
It's quite simple, showing transactional distance (as I came to call it in the 80's), which I can't at the moment elaborate on, but the change of name came at the time of the publication (Moore 1980); and again showing how they stand and vary according to technology,



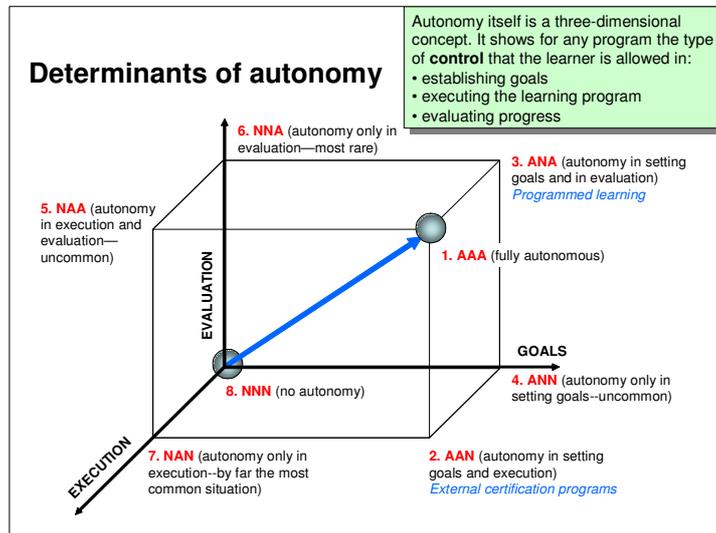


Now, if we rotate this diagram we can move on to the second set of variables that I was interested in, which is from the learner's side, and that was the extent to which the learner has control or is not going to have control, or what I called autonomy, because I was very excited like most people in the early 70's by the humanistic psychology - I had read Carl Rogers (1969) and his book "*Freedom to Learn*" and Malcom Knowles that kind of stuff. So to what extent was the student involved or engaged in the decision making about what he or she was learning.

I had a typology that showed autonomy of the student in deciding what to learn, how to do it, how much to do it:



This led to, and leads to hypotheses consistent with what my colleagues have been saying. As I said that in my front statement about theory, if the theory is not telling you what is not known then it is really not doing us anything. So whole kinds of predictions can come or hypotheses can come and form the interrelationship shown by the model.



**Examples of hypothesized relationships of autonomy, structure and dialog**

When autonomy is low the need for structure is high  
 When structure is low the need for autonomy is high

Programs with low dialog require a high degree of learner autonomy.  
 Programs with low dialog and low structure require a higher degree of learner autonomy.  
 Learners with high autonomy require less dialog, less structure  
Etc

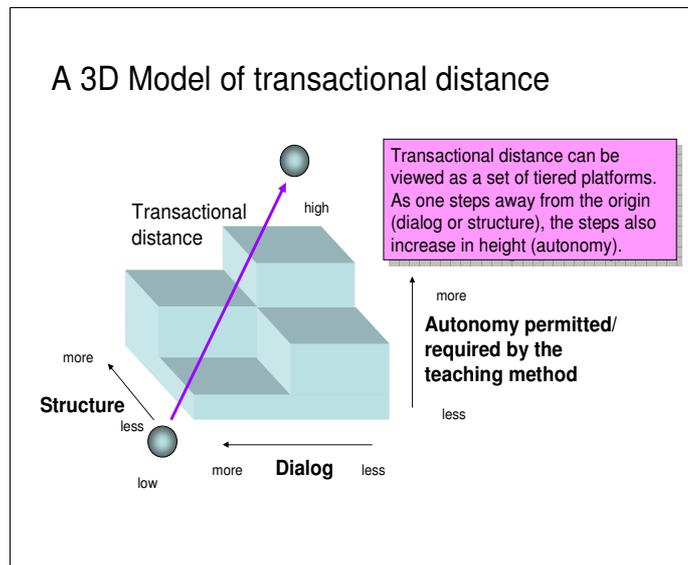
Highly autonomous learners may engage in auto-dialog

Course designers can develop very highly structured courses, with little room for learner autonomy in setting goals, execution or evaluation.

Or can develop very unstructured courses, allowing learners to exercise a high degree of autonomy.

An autonomous learner could put together a highly structured learning program for him/herself — or could make a loosely structured program.

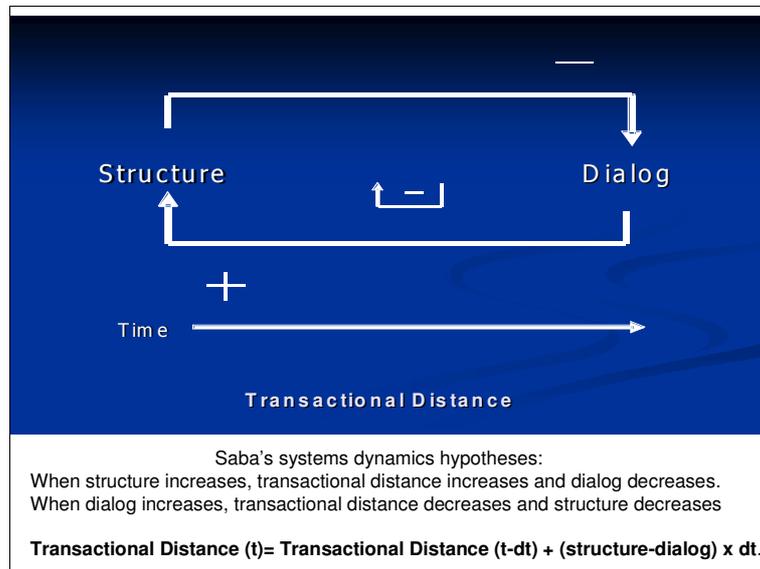
Another way of looking at it is as a set of platforms ... this is another illustration of the model:



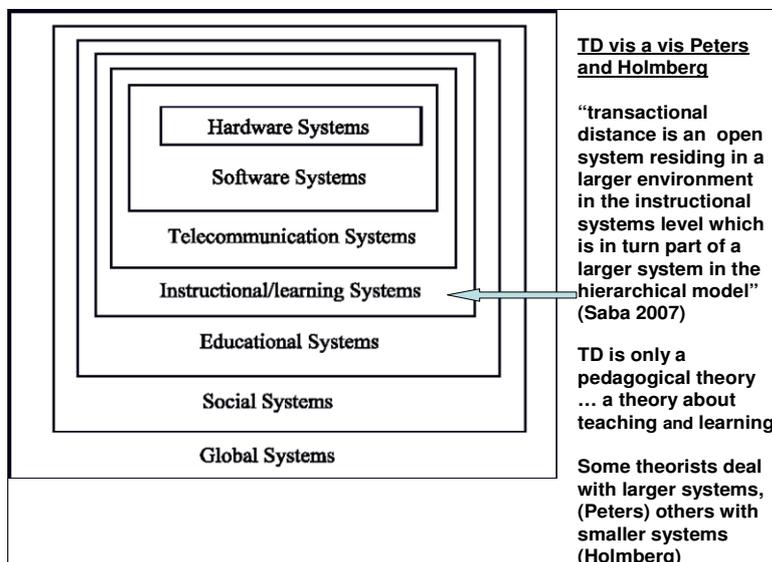
As you step away from the origin, and then the steps increase in height this is the autonomy permitted or acquired by the teaching method. Different teaching programmes can be viewed as glasses stacked on these tiers, the glass represents the degree of the autonomy that's permitted and the liquid then shows the autonomy that's required. For instance, a course taught online, technology that allows a low degree of structure and a high degree of dialogue, permitting a low degree of learner

autonomy, could be designed with a high structure and a low dialogue and requires a high degree of learner autonomy. It depends on the designers. The fact, that what we consider is the capacity of the learner for how high he or she can reach. So using the construct we see that we can design courses for different degrees of autonomy by varying the dialogue and structure, and from a research point of view we can explore and test many interactions within and between these variables, which gets us back to the original investigations.

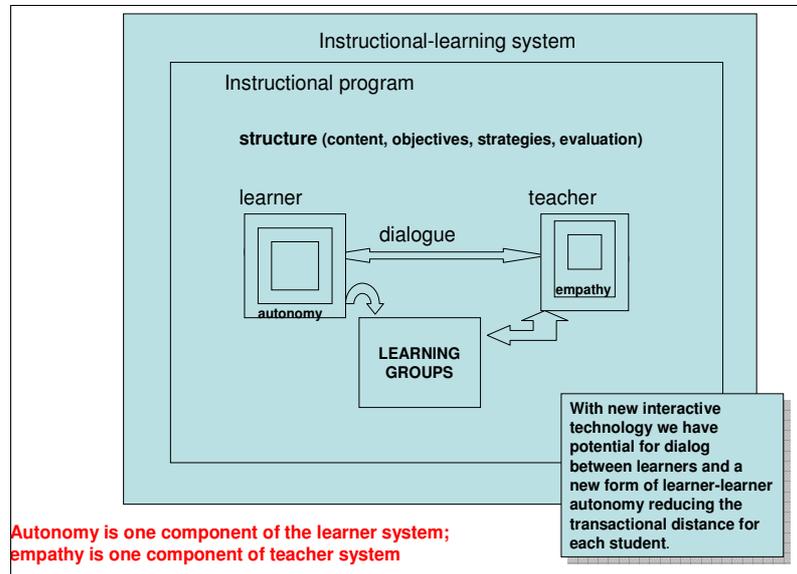
I want to mention one elaboration: Farhad Saba, San Diego State University, has done more work than anyone in further exploring this, and his is a rather complicated model based on systems' dynamics. He is working on the hypothesis of the relationship of transaction systems to dialogue and structuring transaction distance. He's come up with some mathematical formula which he can model on a computer (Saba and Shearer 1994).



And, close to finally, I hope I am not offending Dr Peters the way I have drawn this, but I wanted to show that, according to Saba again, transaction distance lies in bigger systems.



Mine is only a pedagogical theory, it is only about teaching and learning – it is interesting that Dr Peters emphasizes the same commitment to teaching and learning and not to organisations, but I do suggest that some theory still with larger systems, can I say he is dealing with teaching and learning but on a somewhat more macro level than I am, I am certainly relating only learning and teaching through this process of dialogue, I focused on the role of autonomy but there are many other variables inside the learner that may be of importance and of interest, I see Dr Holmberg’s invaluable contribution being more focused on the teacher and the teacher’s relationship to the learner, and that’s how I put empathy in here ... The new frontier of course for all of us is the interaction and dialogue within and between learning groups, which is my note at the bottom there. With new interactive technology we have the potential for dialogue between learners and a new form of learner-learner autonomy that reduces the transaction distance for each student. I will hold my concluding comment until the conclusion.



*3 - Finally each of them was asked to reflect on the implications of their respective theory on research into online distance education and e-learning as well as the development of theories in the field in distance education with an outlook into future developments. Only five minutes were given to each for reflecting on these various issues*

### **Børje Holmberg on implications of his theory on further research**

My own research has an empirical character. I formulated a series of hypotheses based on this theory and had them tried out very, very critically by statisticians. We examined the theory in Popper's spirit. In Popper's thinking you can never prove a theory right, but you can prove if it is wrong. As long as you don't succeed in killing a theory by proving it wrong (by falsifying it) you may accept it as an ad-hoc theory (until something better appears). The studies did not falsify the theory (Holmberg, Schuemer and Obermeier 1982).

I referred to the hypotheses derived from my theory. They are stated very clearly in my book of 2000 (2<sup>nd</sup> ed. in 2003), called *Distance education in essence*. But the principle of my theoretical thinking is better expressed in my book of 2005 "*The evolution principles and practices of distance education*". An important question is: Can my thinking lead to further research? I have a favourite idea of mine, which I will return to before I finish.

Generally theories specific to distance education, like Otto Peters', are really about distance education and about nothing else. But the more general thing that I am preaching concerns education generally. And that is probably why people have

agreed with me to such a great extent. I have even been corrected by an Australian who insisted that it is not only the young and inexperienced, who benefit from the application of my conversational approach. It is equally important to all (Mitchell 1992) The gist of what I am saying is that the empathy approach, taken over from general education, is applicable also to distance education.

### **Otto Peters on implications of his theory on further research**

1. The theory heightens the awareness of researchers of deep-rooted transformations, not only of learning itself but also of attitudes towards learning, learning behaviour, and of life in general. It makes clear that when we start exploring online distance education we enter a new world in which extraordinary and unforeseen progress in disseminating knowledge and skills can be made.

2. The theory helps researchers to see, understand and internalize that online distance education is not just another version of traditional learning using new media for distribution, but a genuine new form of learning with its own principles and its own criteria, with its own unprecedented advantages and also its own serious deficiencies.

3. The theory makes it crystal clear to researchers that online distance education is not just the product of ingenious instructional design, but an inherent element of a powerful societal development, economically, culturally, sociologically and even anthropologically.

4. Researchers are reminded by this theory that it was industrial man who was able, willing and even eager to learn at a distance by correspondence, and that it is post-industrial man and post-modern man who are able to learn at a distance in virtual spaces – quite a different system. Only post-industrial man and post-modern man are able to explore virtual spaces as they are challenged to develop a special degree of creativity, designing imagination, reasoning power, openness, flexibility and willingness to make use of virtual communication. Only post-industrial man is able to exploit oral and written communication, which is broken down and no longer linear. Learners are able to think in configurations as well, to integrate patterns of cognition into their learning. The meaning of student-centeredness and student-orientation acquires new dimensions.

5. The theory urges researchers to explore how far the state of mind of our post-modern students influences and changes learning. This theory may prevent researchers from continuing to design research projects based on traditional educational and pedagogical assumptions that may still be dear to our heart, but are obsolete.

6. The theory applies to distance education and to online learning only and exclusively. Distance education and online education are a form of teaching and learning *sui generis*, for their own sake, with their own advantages and disadvantages. Here we enter another pedagogical world.

7. The theory may help researchers to abstain from transplanting models and experiences of face-to-face education into this new world. Here, learning and teaching require new ideas and new strategies. This workshop has shown that much progress has already been achieved in this direction.

**Michael Graham Moore on implications of his theory on further research:**

I don't really have a lot to say about this. It's up there It was never intended to be other than an explanation of one part of the field. It is purely descriptive, it is not prescriptive. And that is one of my principal points of disagreement about Dr Holmberg's own theory, which I think is prescriptive.

I think that we can agree that theory is describing of reality rather than prescribing an agenda. We can come back to this discussion because I see, my ideas of autonomy is for some students, they are well able and ought, if I was to be prescriptive -- be left alone, and more kindness and friendliness is not necessarily helping the learning process. I am prescriptive and sometimes that is misunderstood. I was asked about misunderstandings, because as a person I believe in friendliness, and I believe in autonomy, but as a theorist I am not advocating autonomy. I am advocating -- if advocate is the right work - the appropriate balance between what the learners can do, what the curriculum and the structure can do and what the instructor can do in the dialogue. ... I am not advocating any of these. It's purely descriptive ...

Transactional distance theory has had the principal effect, I think, of having the field of distance education taken seriously in the U.S., and it was not when I first studied in 1972. It has proven useful and encouraging others to write ... I have cited Dr. Peters, I have cited Professor Alan Tait who is in the audience; I have cited Farhad Saba with regard to authoritative views of the value of transaction distance. Desmond Keegan I couldn't get up there on the slide, Greville Rumble I couldn't get up there either. But theory, didn't I say about earlier in the beginning, theory develops authority as people find it useful, and here are eminent people who endorse this as having value. And here is a whole list of studies most of which are doctoral studies, one or two people in the audience even. Down as recently as 2005, and the first beginning was Saba, probably in 1998. There is ample evidence that people find this a useful basis for their research.

**Examples of empirical studies (mostly doctoral) based on transactional distance**

Saba (1988) \* Saba and Twitchell (1988) \* Shinkle (2001) \*  
 Braxton (1999) \* Zhang (2003) Gallo (2001) \* Bischoff (1993)  
 Bischoff et al. (1996) \* Gayol (1996) \* Bunker, Gayol, Nti, and Reidell (1996)  
 Walker Fernandez (1999) \* Moore, M.H. (1999) \*  
 Vrasidas and MacIsaac (1999) \* Anderson (1999) \* Atkinson (1999) \*  
 Hopper (2000) \* Rovai (2000) \* Chen Y. (1997) \* Chen and Willits (1998, 1999)  
 Chen, Y. (2001) \* Clouse (2001) \* Williams (2003) \* Edstrom (2002)  
 Wheeler (2002) \* Lee and Gibson (2003) \* Witte and Wolf (2003) \*  
 Lowell (2004) \* Stein, Wanstreet, et al (2005) \* Dupin-Bryant (2004) \*  
 Avive, Erlich, Ravid, and Gava (2003) \* Gorsky, Caspi, and Trumper (2004) \*  
 Gorsky, Caspi, and Tuvi-Arid (2004) \* Ofir et al 2004 \*  
 Wikeley and Muschamp (2004) \* Munro (1991) \* Brenner (1996) \*  
 Richardson (1998) \* Thompson, (1998) \* Huang (2000) \*  
 Kanuka, Collett, and Caswell (2002) \* Dron (2002, 2004) \*  
 Stein, Wanstreet, et al (2005) \* Lemone (2005) \*

It appeared obvious after a period of time that what was being described as transactional distance exists in all teaching-learning relationship.

It's hardly surprising when you consider that the concepts are grounded in or derived from mainstream education psychology, education philosophy. The terms transaction comes from John Dewey, who was not in distance education, he was well into children in classrooms. Autonomy came from Rogers (1969) and Maslow (1968) who were psychotherapists essentially, university teachers but they were not trained educationists or students of education. So I am left to say that, where there is transactional distance in all teaching relationships, distance education is that subset of education relationships where the transactional distance is of such significance that essential adjustments of communication and organisation are necessary. So I can see the education universe, I can see transactional distance, and then within that I can see a whole set where transactional distance is such that it is a recognised or a discreet set of teaching-learning relationship. Now you are going to say and I would agree, somewhere now there is a blurring in between what you would recognise as technology in the classroom and technology being used in distance education. So the short answer is, where Dr. Peters says absolutely not, for his perspective, for me the phenomena of dialogue, structure, autonomy and transactional distance are indeed to be found wherever one looks at teaching and learning. But in somewhat accentuated form, if you are in the subset we call distance education.

**4 - After all the audience was invited for a discussion, and the panellists for concluding remarks**

**Børje Holmberg's concluding remarks**

We have a lot of assumptions about how students learn, but generally work with assumptions. It would be wonderful, wouldn't it, if we could find real, well-grounded, almost incontestable knowledge about how students learn. A group of Australian researchers have indicated a possible procedure. What I have in mind are the studies carried out by Marland and his group, who have made qualitative interview studies of the mental processes which mediate, thus come between, the teaching and the learning outcomes (Marland et al. 1990 and 1992). They have paid attention to such mediating processes as strategy planning, hypothesising, elaborating and generating. The studies carried out have included very small groups of students only. I ask myself if it would not be possible to widen studies of this kind in a way to give us more substantial knowledge.

Suppose a battery of interview questions were developed, detailed instructions on how interviews with students should be carried out created by a group of international scholars, a group of interviewers engaged and duly instructed, principles for the evaluation of students' replies specified in cooperation with a group of international experts and competent evaluators engaged. This would give us a chance to interview students all over the world on their learning strategies and practices, to bring this information together and draw constructive conclusions from it.

This would be a vast undertaking. It would require standardising procedures, several parallel examiners interpreting and scrutinising the interviews and a also central body for coordinating the work, but it would produce substantial knowledge of how most people learn and about possible regional or national differences. Where do we find a research institute prepared to start the work, find interviewers and interview examiners, initiate and carry out as well as coordinate work of this kind? I briefly mentioned this plan already at the first EDEN research workshop in Prague in 2000. Were I still active and had I my former research institute, *das Zentrale Institut für Fernstudienforschung (ZIFF)* at the FernUniversität, I should be strongly tempted to attempt this extremely interesting but very difficult project.

What I have indicated is one of several possibilities for really useful research, which would also give us a firm basis for further theory building and practical conclusions.

**Otto Peters' concluding remarks**

I have a positive feeling and two negative ones.

The positive feeling developed when staying and working for the first time at a real *virtual* university: the *Universidade Oberta de Catalunya*. I expected that in such a university technical experts and technological problems would dominate the discussion of this workshop. However, when I took part in some of the afternoon sessions I became enthusiastic about what was discussed there: problems of pedagogy, discussed on a high level of reflection. I did not expect this and I am glad about this – international – development.

On the other hand I do have negative feelings with regard to one special aspect of online learning. Last year I became aware of the fact that most information and communication experts do not appreciate face-to-face dialogues. Checking books on online learning, I saw that most of their authors do not deal with face-to-face discussions at all. Worse, some of them not only ignore this form of education, but even dismiss it. Therefore I have written an article, entitled “Plea for an oral dialogue in online-learning” (cf. Peters 2006), as a contribution to and enhancement of e-learning. This does not mean that I am opposed to online-learning altogether. Quite the opposite. But I recommend that online learning with face-to-face meetings are combined *wherever* and *whenever* possible and adequate. In this article I described all the obvious deficiencies of virtual dialogues and all the definite advantages of face-to-face dialogues. We lose a lot if we neglect or ignore face-to-face dialogues in online learning, regarding them as obsolete. To explore this aspect could be a relevant objective for future research.

The second negative feeling is caused by my concern about the future of online learning. I believe that industrialization and commercialization will continue changing our societies and our private lives to an unprecedented degree. In the same way learning and teaching will become even more industrialized. There are futurists who predict that by the end of our century there will be a fusion of the computer and the human being. Human beings will then lose their traditional identity because a new phenomenon will exist: the “man-machine”. This is of course so far only a prediction of futurists, but when you walk across this building, you can already see persons tied to their computers, entirely absorbed and not noticing anything else around them. The fusion predicted for the end of this century has already started. Therefore, I think research should bring light into this development, show very clearly what is going on, what the consequences will be for learning and teaching, and what will happen to us.

### **Michael Graham Moore’s concluding remarks**

I very much appreciated the question of the hierarchy of theory, and the end of the question said something like it would be desirable to move from description to explanation to prediction, e.g. for example under certain conditions learners will respond better than in other conditions. I greatly appreciate your articulating that perspective, I think that is exactly right. For myself I believe that that’s what we are

trying to do in the application of transactional distance theory and it's where I don't really conflict with Børje, it truly is a communication issue. If I were representing Børje's, if I may, I would say there is a range of degrees of empathy in teaching programmes, and for some students more empathy is important, and for some students less empathy is important. An interesting research question is which is which? Rather than "empathy is a good thing for everybody". It's the same for autonomy. Autonomy is a very good thing for some people and some subjects under some conditions, and a very bad thing for other people.

So the interesting research questions are "under what conditions for what kind of learners is what degree of autonomy desirable? I really think we are close on this, I really think if we could only get ourselves organised better, and if we could stop spending energy and time and money re-labelling what we do, we can take these variables and we can generate a decent research agenda.

But it goes to Ross's [M.G.M. refers to Ross Paul] point, and then I'll shut up. His question is absolutely super, it is not comfortable, but in some ways we are being loved to death! People are talking about what they do with a computer and they say: "you know, we are into distance education" and they know nothing of the pedagogy, nothing of the kind of issues we've been talking about here today. What does that matter? It's not a matter of vanity, it is that they do stupid things and they got research questions to which we either know the answer or we know there is not an answer. So there is an awful lot of wheel spinning and misdirected energy both in application and research because the theory isn't known and it comes back to where I work, the colleges of education, and many of you in these institutions, we are not doing a very good job of educating the generations of educators in our discipline. For everyone we turn out who knows, ten more bought a computer and they've got online and they are doing things, usually in a very misdirected way. So, I don't know whether to be optimistic ...

I guess it's like in the Dark Ages, some of us will keep the light alive ... and I am not being too negative : let me put up my closing thought, if you are ready:

*Michael Graham Moore then comments the following slides :*

**“concluding comment on how you view the interpretations of and the debate(s) about your theory”**

I have very little to comment .....

One thing I would like to point out is that transactional distance theory was/is no more than that, --- a summary of knowledge in one part of the field ... the teaching-learning process.

As such, it is purely descriptive .... It is not prescriptive ..... some authors think I am an advocate for more or less learner autonomy, more or less dialogue, more or less structure ..... This is NOT so.

I am happy that transactional distance theory has served at least one purpose successfully which is to ensure that distance education is taken seriously as a field of study in the United States, which was not the case before 1972.

It has proven useful in encouraging others to write about theory and it has proven useful as a foundation for research; examples are shown in the Handbook chapter.

I am quoting Insung Jung, who is a Korean scholar who did a very nice survey of web based instruction from the perspective of transactional distance. And she came up with some realistic conclusions: When she looked across all the research it showed little resemblance to established pedagogical theory in general or distance education theory in particular. Some studies raised a research question and discussed the findings and theoretical framework, other studies had little relationship to established learning theories ... and I find that unhappy... but realistic.

**Conclusion and future directions**

Jung (2001):

“WBI research showed little resemblance to established pedagogical theory in general or distance education theory in particular. While some studies raised their research question and discussed the findings in theoretical frameworks, other studies had little relationship to established learning theories”.

I fear:

further proliferation of conceptual confusion and mis-directed research energy

I hope:

More and better study of educational theory, including education psychology, philosophy, curriculum design, instruction as requirement for higher education practice and research

Leading to research better grounded in theory

Either way:

I expect more attention to delivery methods that are “transactional” rather than “transmissive” (Burge, 1988; cited in Munro, 1998).

Learner to learner based on constructivist philosophy and methodology with implications for study of learner autonomy

I fear that this may get worse; what I call here non-theoretical grabbing at data. Conceptual confusion drives me crazy: distributed learning, flexible learning, open learning, e-learning and ... Have you ever been to a conference on learning and then half the people were talking about teaching? We come to a conference on e-learning because we know we are going to talk about teaching and learning, so why should we have a conference on E-learning rather than E-education? So what is E anyway? When I was teaching online with video was I into E? Sure I was!

I don't know how we are going to solve this. I hope more research connected to theories through the study of education theories including the foundations ... I expect at least there will be more attention to learner-learner dialogue, but that is a natural, it's obvious. Constructivist philosophy which I consider to be humanistic psychology warmed over for the 21<sup>st</sup> century, but that's OK, that's driving a lot of the enthusiasm in schools of education; and this will lead to more understanding of that area that I have shown an interest in, of learner autonomy and what is appropriate dialogue with teachers and appropriate course structures.

So on the score of 1 to 10, where am I? Somewhere in the middle, I am not wildly optimistic but I am not too depressed ... let's see what happens!

The handbook of distance education in its second edition comes out next year. Holmberg has a chapter in it, Peters has a chapter in it, I have a chapter in it, several people in the audience have a chapter in it ... Erlbaum is the publisher.

*Distances et savoirs* souhaite prolonger les échanges suscités au cours de cette conférence, en préparant un prochain numéro autour de la seconde édition du "Handbook of distance education" annoncée par Michael Graham Moore. Nous invitons dès à présent les lecteurs et praticiens de cette seconde édition à nous proposer leur réflexion critique sur tout ou partie du "handbook".

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*Distances et savoirs* wishes to extend the discussion that started at the conference, by drawing up a new issue of the journal around this second edition of the "Handbook of distance education" announced here by Michael Graham Moore. We invite the readers and the « practitioners » of this second edition to propose their critical thinkings on all of part of the « handbook ».

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## Biographies

BÖRJE HOLMBERG

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Börje Holmberg est né en 1924 à Malmö, Suède. Il a étudié l'anglais, l'allemand, les langues romanes et les sciences de l'éducation à l'Université de Lund, où il a également obtenu son doctorat en 1956.

En 1956, Börje Holmberg devient directeur de l'enseignement d'Hermods en Suède, alors la plus importante organisation d'enseignement à distance en Europe, qui, de 1955 à 1975 enregistrait entre 75 000 et 100 000 étudiants par an. En 1966 il est nommé Directeur Général de la Fondation Hermods, fonction qu'il quittera en 1975 lorsque le gouvernement suédois prend le contrôle d'Hermods. Pendant la période passée à la tête d'Hermods Börje Holmberg publie des études sur l'éducation à distance, trois monographies et plusieurs articles.

En 1976, Börje Holmberg devient Professeur en méthodologie de l'enseignement à distance et Directeur de l'Institut pour la recherche en enseignement à distance à la FernUniversität à Hagen, Allemagne. Il publie plusieurs ouvrages et de nombreux articles dans des revues scientifiques. Parmi ses travaux on peut mentionner « Theory and Practice of Distance Education », une deuxième édition révisée en a été publiée par Routledge (London, New York) en 1990, « Growth and Structure of Distance Education » (Croom Helm, London, 1986), « Mediated Communication as a Component of Distance Education » (FernUniversität, Hagen, 1989) et « The evolution, principles and practices of distance education » (BIS-Verlag, Oldenburg, 2005), plusieurs rapports de recherche, concernant par exemple ses travaux sur l'approche empathique et la théorie de la « conversation instructive guidée ».

Après sa retraite de la FernUniversität Börje Holmberg continue de contribuer à la recherche et au débat sur l'enseignement à distance, comme en témoignent par exemple ses articles publiés dans « Open Learning » et « Epistolodidaktika ». Il est également actif en tant que praticien du domaine.

Il a ainsi pris part à la conception d'une nouvelle université à distance dans le domaine des sciences appliquées, en Allemagne, la « Private FernFachhochschule Darmstadt » dont il en fut le Recteur de 1994 à 2001.

Börje Holmberg est docteur honoraire de la Deakin University in Australia et de l'Open University au Royaume Uni. Il est membre de Kungliga Fysiografiska Sällskapet i Lund, une académie des sciences fondée en 1792, il est Chevalier de

l'Ordre Royal de Vasa en Suède, ainsi que de l'Ordre de la Rose Blanche en Finlande.

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Michael G. Moore est reconnu dans les milieux universitaires pour sa prééminence dans la promotion de l'enseignement à distance aux Etats-Unis. Il a publié les premières approches de sa théorie sur l'enseignement à distance en 1972, et il témoigne d'un certain nombre de « premières » dans son domaine. Tout en enseignant le premier cours diplômant de niveau licence sur l'enseignement à distance à l'Université de Wisconsin dans les années 70 il contribue à la création de la conférence annuelle nationale en ce même lieu.

En effet après avoir travaillé pendant neuf ans à l'Open University du Royaume Uni il rejoint l'Université de Penn State en 1986, où il fonde la première revue scientifique américaine (*American Journal of Distance Education*), établit le premier cursus de cours de licence enseigné à distance, lance un symposium national de recherche sur l'enseignement à distance, et une communauté d'intérêt en ligne (DEOS). Il indique par ailleurs avoir l'expérience d'un enseignement ayant recours à toutes les technologies possibles et s'adressant à pratiquement tous les types d'étudiants.

Moore est membre des comités éditoriaux de la plupart des principales revues d'enseignement à distance, et ses publications incluent « *Contemporary Issues in American Distance Education* » (Pergamon Press, 1990), « *Distance Education: a Systems View* », avec Greg Kearsley comme co-auteur (Wadsworth Publishers, 1996 et 2005), publié par la suite en chinois, japonais et coréen, et le « *Handbook of Distance Education* » (2003 et 2007).

Ses diplômes universitaires en économie et en éducation, et une expérience éducative de sept ans en Afrique au commencement de sa carrière sont à l'origine d'un intérêt soutenu pour l'éducation pour le développement ; ce qui se traduit par des activités à la Banque Mondiale et de nombreuses missions de consultations pour l'Unesco, le Fonds monétaire international et le Commonwealth of Learning ainsi que pour plusieurs gouvernements étrangers.

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Référence : <http://www.uni-oldenburg.de/zef/asf/otto.htm>

<http://www.c3l.uni-oldenburg.de/24739.html>

Otto Peters est professeur émérite à la FernUniversitaet – l'Université ouverte et à distance allemande – à Hagen. Il est né à Berlin, en 1926. Il a étudié les sciences de l'éducation, la psychologie et la philosophie à l'Université de Humbolt et à l'Université Libre de Berlin et obtenu son doctorat à l'Université de Tuebingen.

Depuis 1965 l'activité d'Otto Peters a porté sur la description et l'interprétation de l'enseignement à distance strictement en tant que chercheur, tout d'abord au Centre de l'Education de Berlin, puis à l'Institut allemand pour la recherche en enseignement à distance, et enfin comme Professeur de Conception éducative (Instructional Design) à Berlin.

En 1975 il devient le Recteur fondateur de la FernUniversitaet à Hagen et occupe cette fonction pendant près de dix ans. Il consacre ensuite exclusivement ses activités à la recherche sur l'enseignement à distance. Il a rendu visite et étudié de nombreuses institutions éducatives sur tous les continents, écrit nombre d'ouvrages, dont le plus récent est « Distance Education in Transition », dans sa quatrième édition, publié par l'University of Oldenburg press (BIS-Verlag). Il est le premier à avoir introduit les concepts de planification et d'organisation dans l'analyse de l'enseignement à distance et à lui avoir attribué des caractéristiques « industrielles » telles que la division du travail, le marketing, la gestion, le contrôle de qualité.

Certains de ses livres ont été traduits en espagnol, portugais, coréen, chinois et anglais. Professeur émérite à la FernUniversitaet depuis 1991, Otto Peters n'en continue pas moins d'étudier les aspects pédagogiques de l'enseignement à distance et en ligne. Il est un expert et mentor régulier pour le programme en ligne du Master d'enseignement à distance des « Fondations de l'enseignement à distance » conjointement offert par le Collège universitaire de l'Université du Maryland aux Etats-Unis et l'Université d'Oldenburg en Allemagne.

Otto Peters a été Vice Président de l'International Council of Distance Education pendant huit ans. En 1999 il lui a été décerné le Prix d'Excellence de l'ICDE pour ses contributions tout au long de sa carrière au domaine de l'enseignement à distance. Il est docteur honoraire de quatre universités (Open University, England; Deakin University, Australia; Empire State College, N.Y.; Open University of Hong Kong).