

# Chapter II

## Working with Gordon Pask (1967–1978): Developing and Applying Conversation Theory\*

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### ABSTRACT

*Conversation theory was conceived and developed by Gordon Pask in the days when he was research director of System Research Ltd., a non-profit research organisation founded in the 1950's. I worked with Gordon at System Research Ltd. between 1968 and 1978. Here, a personalised account of the development of conversation theory and its applications is given as they were observed and participated in during those years. Conversation theory is reflexive: it explains the observer to himself. Being party to its development was a journey of self-discovery and self-invention in which Gordon was the guide and mentor. The account has been ordered chronologically; also, it has been tried to show how conversation theory evolved in a "boot-strapping" manner as a tool and as an explanation of its own significance. Gordon, par excellence, knew how to foster creative conversation and "moments of excellence".*

### INTRODUCTION

In a conversation with Gordon in 1992, the suggestion was proffered, somewhat whimsically, that cybernetics, in its many guises, could well be described as the art and science of fostering good will. Gordon accepted the suggestion in all seriousness, reflecting back the understanding that

unwittingly, something had been said of moment. There has been conversation with Gordon since 1967, when, as an undergraduate in Psychology, the idea of cybernetics was not only introduced but the chance was also given of working with one of the few people in the UK who was bold enough to describe himself as a cybernetician first and as a psychologist, computer scientist, biologist or

mathematician second. Gordon who, at that stage, had already established an international reputation as an innovator and visionary and had established and maintained an independent multidisciplinary research group (System Research Ltd, Richmond, Surrey—a non-profit organisation) for more than a decade has been referred to.

Six months were spent in Gordon's laboratory, working as the lowliest research assistant, thoroughly ashamed of ignorance but eager to learn. I quickly began to appreciate that not only was Gordon a brilliant psychologist, carrying out original studies of human learning sustained by remarkably precise and perspicuous theorising, but he was also a polymath, at home in many fields, and, more than that, he had an unashamed commitment to cybernetics as a unifying discipline, regarding its conception as the greatest intellectual achievement of the 20<sup>th</sup> century.

Cybernetics was fallen in love with. Taking one of Gordon's then most recent papers as a starting point (Pask, 1966) it was read avidly and widely. A serious and dedicated student of cybernetics was become. As doing this, duties were also carried out in Gordon's laboratory; recruiting subjects for experiments, acting as experimenter, and analysing data. The significance of what was being asked to do came bit by bit.

Many things were being studied: skill acquisition, man-machine interaction, styles and strategies of learning, and small group interaction. Gordon had developed a model of learning in terms of the "symbolic evolution of concepts," which embodied an understanding of how organisationally closed systems that interact one with another inevitably create symbolic domains of interaction that engender self and other consciousness. He had a clear understanding of how biological systems adapt and evolve to become a medium for mental life.

The model of learning gave rise, naturally, to a theory of teaching: having set some forms of goals or criteria, teaching becomes a control process, in Gordon's words, "teaching is the control of

learning" (Pask, 1968).

One development of Gordon's thought was the design and specification of mechanised systems that, as adaptive controllers, supported the effective acquisition of skilled behaviours. With his co-worker, Brian Lewis, Gordon designed many such systems, carried out extensive empirical studies, and provided models and theoretical frameworks to guide good practice that were (and still are) definitive. When arriving on the scene, projects were in progress on tracking skills, keyboard skills, generalised signal transformation skills, and group learning and decision making. Seminal and pioneering work was being carried out using computer programmes to model learning as an evolutionary process.

I graduated in psychology in 1968 and, at Gordon's invitation, returned to work at System Research Ltd, where I remained—apart from a year's secondment to the Open University to work with Brian Lewis—for 10 years. In 1978, I left the research field and went off to become a practitioner, an educational psychologist. In that context, conversation theory served as an exceptionally useful guiding framework (Scott, 1987).

There is not space to catalogue all that was done in those days at System Research Ltd. In two papers written some years ago (Scott, 1980, 1982), an overview with appropriate references was given. What will be done here is the description of some of the key studies in which there was involvement in to show how conversation theory was seen to come into being and take the form that it did. Some thoughts and comments on the significance of the work that was done will also be offered, as seen now, after more than 25 years.

## **Playing with Adaptive Systems**

Many of Pask and Lewis's studies of adaptive teaching used a generalised, signal transformation task in which, as well as acquiring a high level of performance in a perceptual-motor skill (pressing buttons, with a specified time interval,

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