TECHNOPHOBIA: INCIDENCE AND POTENTIAL CAUSAL FACTORS*

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INTRODUCTION

The present study deals with attitudes toward and the reactions of individuals toward specific common technological innovations. This study attempts to replicate, in a different setting, a study carried out in Montreal by Gardiner (1981). The present study, conducted in the Halifax-Dartmouth Metropolitan area, also examined additional factors thought to be related to persons' attitudes towards technology.

It is estimated that there are well in excess of one billion machines currently in use in North America (O'Brien, 1964). Gardiner (1981) suggests that an increasing reliance upon 'machines' may cause, in future, a shift in the power base away from those who have economic power to those who have 'knowledge' power, that is, knowledge about technology. In a more general sense, this proposition might have been drawn directly from Karl Marx's analysis of social change.

Ogburn (1923) proposed that social change is propelled by material invention including specifically, technical processes. He also asserted that among the factors that interfere with the acceptance of technical progress is fear (Martindale, 1960).

Spicer (1952) reviewed a number of cases involving resistance to technological change. He argues:

It seems possible, for instance, despite our ignorance to support the following generalizations: people resist changes that appear to threaten basic securities; they resist proposed changes they do not understand; they resist being forced to change (p. 18).

It would be an oversimplification of Spicer's argument to assert that people resist technology out of fear. Yet his argument would, at least, suggest that fear may be a component of this resistance.

A very considerable body of research finds that acceptance of technological innovation varies by characteristics of the adapters, as well as how infor-
Information about technical innovations is communicated to potential adapters (Rodgers, 1961; Wilkening, 1958; Bohlen, 1959). While most of this research is related to adaption of technical innovations in agriculture, it is empirical, extensive, well replicated, international in scope, and has a well-developed, middle range theoretical foundation. Unfortunately, for present purposes, most of this literature deals with rates of adaption and appears to assume that acceptance of new technology in agriculture is a positive value. This bias is reflected in the categories of adapters usually used; these categories range from 'early adapters and innovators' at one end of the continuum to 'laggards' at the other. As such, questions relating to fear of technological innovation are insufficiently researched in this body of literature.

Blauner (1964) examined the relationship between technology and worker alienation. He proposes that alienation exists:

... when workers are unable to control their immediate work processes, to develop a sense of purpose and function which connects their jobs to the overall organization of production, to belong to integrated industrial communities, and when they fail to become involved in the activity of work as a mode of personal expression (p. 15).

While it would be a moderate conceptual leap to equate fear with alienation, certainly it is not unthinkable to suggest that fear is a component in worker resistance to technological innovation under conditions similar to those which produce worker alienation. If this is the case, then those persons who resist using new technology may find themselves unable to adapt to changing employment requirements. Responses of this type have been variously referred an 'trained incapacity', 'occupational psychosis', and 'professional deformation' (Merton, 1957, pp. 197–198).

Michalos (1982) and Smith (1980) have examined public responses to Gallup Opinion Polls. Smith examined polls in the United States between 1946 and 1976. Michalos examined opinion polls in both Canada and the United States between 1963 and 1975. Neither researcher found 'technology' to be an important issue in these opinion polls. The exceptions include concern about unemployment as a function of automation, and concern about nuclear-related issues.

Michalos' work seems to indicate that these concerns were expressed, over the years, marginally more often in Canada than in the United States (Michalos, 1982, Vol. 5, pp. 189, 191, 192, 200). These data are difficult to interpret in