

ABSTRACT

A NOTE ON ORGANIZING MARKETING AND TECHNOLOGY DISCUSSIONS: A PROPOSED FRAMEWORK FOR RESEARCH AND MARKETING EDUCATION

Nils-Erik Aaby, University of Colorado at Colorado Springs
Lexis F. Higgins, University of Colorado at Colorado Springs.

With increased emphasis on Technology and R&D it appears relevant to focus more research and education towards marketing's role vis-a-vis these areas. To accomplish this, it is argued here that marketing scholars need to focus their efforts on at least three major aspects of the marketing - technology relationship. These are:

1. To get better understand how marketing can influence the process of technology development (particularly in the high technology area) without stifling innovative efforts.
2. To learn how marketing better can nurture technology from innovation through growth to maturity.
3. To better understand how marketing can be used to manage technology globally, and how technology transfers can be better managed and controlled.

This note makes a short review of recent definitions of technology used in marketing. It summarizes common technology definitions in a table. The left column of the table displays the orientation taken by the source cited, while on the right definitions are subjectively positioned on a continuum from "closely linked to technology" to "closely linked to marketing." The paper discusses concepts such as "innovation-driven," and "market-driven" technologies, "supply push", "market-pull", "discontinuous," "dynamically continuous" and "continuous" innovations. It also addresses the concepts of "radical", "incremental"; "base," "key," "pacing" and "emerging"; and "spin-off" and "main stream", "small high-tech," "divisional" and "multi-organizational" technology.

It contrasts, the above concepts with the discrete definitions of "product," "process," and "management" technology and suggests a framework for studying marketing and technology. This is a 3 x 2 matrix which

relates types of technology to different orientations of management on the continuum from technology orientation to market orientation. The contributions and the role of marketing can be analyzed by examining each technology type on a technology oriented/market oriented continuum.

The note concludes that there is considerable potential for theoretical and applied research, and relevant discussions in marketing education to answer this challenge. For example, in the area of product technology, the role that marketing should or can play in technology driven firms should be more extensively examined. Creative ways need to be established for determining benefits and/or disadvantages of new technology in relation to markets. Also, examination of marketing's role in the development, application, and commercialization of process technology needs to be further explored. Other areas may include the evaluation of the incremental value-added based on benefits provided, the impact of process technology development on marketing planning and sales forecasting, and the relationship of process technology to customer support organizations. Finally, the contribution to marketing theory from technology related issues should be examined, refined, and applied in creative ways to the technology orientation.

Other broader research questions may be: What role should/can marketing play in technology oriented environments? What elements of existing knowledge in marketing can be applied to high technology environments? What relevant underlying theories in marketing that govern the development of marketing management are appropriate? How should this management technology be developed and how does it relate to product and process technology? What existing marketing tools are applicable and what new tools can be developed?