

國立陽明交通大學科技與社會研究所
114 學年度碩士班考試入學複試筆試試題

科目：英文閱讀與理解

★說明：以下兩題為翻譯題（英翻中）。若時間不足，請就各題內容儘量說明與解釋。

1. There are alternative modes of democratizing science and technology. Society is already in science and technology. The strong programme, actor-network theory, feminist studies, and other parts of STS have all shown, at least as an approximation, the social construction of science and technology. Scientific knowledge is the result of the mobilization of resources to produce agreement among key researchers. Similarly, successful technologies are the result of the interplay among multiple actors and materials to produce artifacts that can be said to serve specific interests. Knowledge and artifacts may reflect the socialization and training of the actors who make them, and may also reflect assumptions that are more widely held. Thus if there is a problem of democracy, it is a problem of the ways in which science and technology are socially constructed, or a problem of the parts of society that participate in the constructing.

Sismondo, Sergio (2010) 'Expertise and Public Participation,' p. 186 in *An Introduction to Science and Technology Studies* (Second edition). Malden, MA: Blackwell.

2. Within innovation studies it has long been assumed that product innovation are mainly developed by product manufacturers. This piece of conventional wisdom has been turned on its head. While leading scholars like Nathan Rosenberg (1982) and Bengt-Ake Lundvall (1988) have shown growing recognition of the importance of users, it is the detailed research carried out by Eric von Hippel and his students that has been particularly influential. In one of his first studies von Hippel (1976) showed how users innovate new products in the fast-changing scientific instrument industry. Von Hippel studied four families of scientific instruments: the gas chromatographer, nuclear magnetic resonance spectrometer, ultraviolet absorption spectrophotometer, and transmission electron microscope.

Nelly Oudshoorn and Trevor Pinch (2008), p542 in Edward J. Hackett, Olga Amsterdamska, Michael Lynch, and Judy Wajcman (eds.) *The Handbook of science and Technology Studies*, the Third Edition, Cambridge, MA: MIT Press.