The Nature of a Profession

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Introduction

- Words like profession and professional are used in many different ways.

- Professional employees are employees of a certain status, who are expected, within limits, to put the interests of the organization they work for above their own convenience.

- There is no single definition of a profession.

- The meaning of the word depends on who is using it and what the context is.

- If we look at a range of occupations that would commonly be described as profession –lawyers, doctors, dentists, accountants, architects and so-on, there are a number of characteristics that most of them have in common:

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– substantial education and training are required in order to practice the profession;

– The members of the profession themselves decide the nature of this training and, more generally, control entry to the profession;

– The profession is organized into one or more professional bodies;

– The profession lays down standards of conduct with which its members must comply and , where necessary, enforce these through disciplinary procedures.

Professional Bodies

- A profession is typically organized into one or more professional bodies.

- A professional body usually starts by a group of people coming together because of a shared interest in a particular type of activity.

- The BCS was set up in 1957 by a group of people working in the new and expanding field of computers, who wanted the opportunity to exchange ideas.

- A professional body may also be started by people engaged in the same type of activity, who want to protect their business against others who may be trying to enter it without having the proper knowledge or who may be practicing it dishonestly.

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- As the professional body matures, it is likely to develop a range of functions, of which the following are the most important:

  – Establishing a code of conduct to regulate the way members of the body behave in their professional lives and a disciplinary procedure to discipline members who breach this code;
  – Establishing mechanisms for disseminating knowledge of good practice and new developments to its members , typically through publications and conferences but increasingly through the use of the worldwide web;
  – Setting standards of education and experience that must be met by people wishing to become members of the body;
  – Advising government and regulatory bodies about matters within its areas of expertise;

Reservation of Title and Function

- In certain cases ,where it is considered to be in the public interest, Parliament may agree to grant the members of a professional body some sort of legal monopoly.

- There are two different ways in which this can be done.

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- First, the use of the name of the profession may be restricted to those people who are appropriately qualified. A restriction of this sort is called *reservation of title.*

- Secondly, the law may state that certain activities are restricted to people with appropriate qualification. This is called *reservation of function.*

Software Development as Engineers

- The development of software and information systems in general is now usually regarded as a branch of engineering and the people who practice it are considered to be engineers.

- Traditional engineers design and build a wide variety of objects –dams, bridges, aero planes, cars, radio and television transmitters and receivers, computers, plants to make fertiliser or plastic, and so on.

- There are two constraints that apply to all such activities and which can be regarded as characteristic of engineering:

  - Engineering involves designing and building things that must work properly, that is, must meet a set of predetermined requirements concerning their functionality, their performance, and their reliability
  - The process of designing and building the object must be completed within specified constraints of time and budget.

The Status of Engineers

- The legal status of the engineering profession varies a lot from one country to another .

- In the USA, the profession is very strictly controlled.

- Both the title of engineer and the function of engineering are reserved.

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- Because the relevant legislation is state legislation rather than federal legislation, the details vary a little from state to state. However, the position is that:
  - It is illegal to call yourself an engineer in a given state unless you are registered with the State Engineers Registration Board;
  - It is illegal for a company to use the word 'engineering' in its name unless it employs at least one registered engineer;
  - Academic programmes including the term engineering in their title must be taught mostly by registered engineers;
  - It is illegal to carry out engineering work except under the supervision of registered engineers.

International Recognition of Engineering Qualification

Recognition within Europe

- The EU has issued several mobility directives. They are intended to encourage the movement of qualified professional between countries of the EU. The general principle is that, if you are qualified to practice your profession in one country of the EU, you will be treated as qualified to practice it in any country of the EU.

Washington Accord

- In 1989, , the engineering professions in Australia, Canada, Ireland, New Zealand, the UK and the USA agreed that the standards and procedures that they each used to accredit the academic component of an engineers' education and training were similar enough for each of them to recognize and accept such qualifications gained in any of the other countries .

International Register of Professional Engineers

- The countries that are signatories to the Washington Accord have also established a body called the Engineers' Mobility Forum, which maintains the International Register of Engineers.

- The register began operation in 2002 and is open to engineers qualified at the level of charted Engineers.

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Compulsory Registration of Software Engineers

- A number of disasters can be traced directly to lack of professional competence on the part of the software engineers who developed the systems.

- There have been calls for the compulsory registration of software engineers and for legislation to ensure that software engineering activities are carried out under the supervision of registered software engineers.

- Some members of the profession have advocated a legal requirement that all software must be written by registered software engineers, or at least under their supervision. Such a regulation however would be impossible to enforce.

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