

INFORMATION, LIBRARY AND LIBRARY EDUCATION

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The Terminology

Terms are representation of ideas (or thoughts), physical objects, matters, etc. They may not seem to be very important, but in reality, they are of vital importance. As Hsün-tzu said, "If a true King were to appear now . . . he would have to examine carefully to see why names are needed, how to go about distinguishing between things that are the same and those that are different, and what essential standards should be used in regulating names . . . The wiseman is careful to set up the proper distinction and to regulate names so that they will apply correctly to the realities they designate. . . . One must be careful to distinguish them."¹ Clearly, in Hsün-tzu's mind, to define terms carefully is a necessity for standardization. Mo-tzu went on further to clarify the importance of standardization, "There are countless different views [on one object]. The differences in views are derived from the different backgrounds of individual viewers . . . To unify the standards and judgments throughout the world would produce order."²

Recently, a great deal of discussions about 'information' (資訊), 'information system' (資訊系統), 'information science' (資訊科學), and 'information industry' (資訊工業) have

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taken place in the Republic of China. These terms are frequently used interchangeably with the terms of 'computer' (計算機), 'computer system' (計算機系統), 'computer science' (計算機科學), and 'computer industry' (計算機工業) in these discussions. Confusions, even misconceptions, have been introduced to the general public of the society through news media. It is therefore imperative to clarify the confusions and define these two groups of terms.

1. Information and computer:

We often see these two terms being used freely without discretion in Chinese newspapers. Of course, at the present time, the computer is the most powerful 'tool' for information handling. But it is not the only tool, and it is nothing more than a tool. Up to the present time, we have used tools (besides computer) for information retrieval such as card catalogues, directories, bibliographies, indices and telephone. We have also used other tools for information processing such as typewriter and photoduplication machines. In the future, we may discover (or invent) more powerful 'tool(s)' than a computer for the same purposes.

For further clarification, we may define 'information' as something useful for a purpose, or meaningful to a person; it "exists in varying forms, in varying degrees of depth and width, and, through varying means, it is exchanged, conveyed, and accumulated."³ In the meantime, we may say that a 'computer' is, up to the present time, "the single most powerful tool for processing, storing, and retrieving information."⁴ In other words, information is the 'substance', while a computer is the 'means' to handle this 'substance.'

2. Information system and computer system:

An 'information system' is set up for processing, organizing, storing, retrieving and disseminating information. Depending

upon the needs, the intended missions, and the available resources, an information system is designed. It "can be defined as a collection of people, procedures, and equipment designed, built, operated, and maintained to collect, record, process, store, retrieve and display information."⁵ Such a system may be manual, as what we had in the past; or it may be built with mechanical means (e.g. a computer) for better efficiency as what we may have in the future; or it may be a combination of both as what we have today. A 'computer system' may serve as the core of an 'information system', but it may also serve as the core of other systems, e.g. communication systems, accounting systems.

3. Information science and computer science:

'Information science' is not exactly equal to 'computer science'. The former studies "the properties and behavior of information, the forces governing the information transfer process, and the technology necessary to process information for optimum accessibility and use."⁶ And the latter, at the present time, concentrates on the studies of "the digital computer and the phenomena surrounding it. Work in the discipline is focused on the structure and operation of computer systems, on the principles that underlie their design and programming, on effective methods for their use in different classes of information tasks, and theoretical characterizations of their properties and limitations. Also, a substantial effort is directed into explorations and experimentation with new computer systems and with new domains of intellectual activity where computers can be applied."⁷ In short, information science concentrates on the 'substance' (information), and its behavioral pattern(s), and the capabilities as well as the limitations of equipment in order to facilitate the usage of this 'substance'; while computer science concentrates on the improvement of the capability and effectiveness of the 'tool' (computer, at this time). There is some overlap between them, but differences can be shown clearly by comparisons with those between the

disciplines of Architecture and Civil Engineering.

4. Information industry and computer industry:

Serious confusions exist between the terms of 'information industry' and 'computer industry'. This confusion is evoked from the fact that most of the manufacturers of computers also invest a great deal of efforts into making software packages and some of these packages are designed for information handling. However, an information industry does not have to be a manufacturer of computers. It is also true that a computer manufacturer does not have to be (but for purpose of sales, it should be) a part of an information industry. It should be clearly understood that these two terms are not identical and should not be used interchangeably without discretion.

Information and Library

A modern library no longer merely functions as a warehouse of printed materials. Through carefully designed selecting process, a modern library collects useful, or potentially useful (to its designated clientele), information of varying forms. For the convenience of its clientele, a modern library organizes its collection to facilitate the usage. A modern library also provides varying services manually, or through the aid of machines, to meet the demands and potential needs of its clientele and guide its clientele to a full utilization of its own collection as well as collections of other libraries. In other words, a modern library should function somewhat as an information broker. Based upon these designated missions, a modern library is organized and its staff, trained.

There is no way we can over-emphasize the importance of a library. It is well established and publicly recognized that the Library is an essential factor of the growth of knowledge and the

progress of the society. The efficiency of the operations of the Library plays a vital role in speeding up, or slowing down, the growth and the progress. So long as the computer remains the most powerful tool of information handling, it should be an integral part of a library system. And the library staff, in addition to the traditional library science training, must possess enough knowledge of computer capabilities and its limitations to operate, even to design, a computerized information system. This necessitates the alteration of the concept of library education to include information theory and computer technology as part of the required curriculum.

Library Education

In Taiwan, library education has been defined as a discipline in the domain of humanities and/or social sciences. The department of library science is usually located in the college of liberal arts. The entrance examination of colleges and universities for potential students of library science and those of humanities and social sciences is exactly the same. In the make-up of the tests, knowledge of mathematics, which is important in pursuing knowledge of computer systems, is of no importance. This concept is wrong, the arrangement is unacceptable, and the result is detrimental.

As mentioned earlier in this paper, a library is a service center similar to an information broker. The clientele of a library is composed of people of all kinds of backgrounds of all intellectual levels. They are not necessarily people with social sciences or humanities backgrounds. A librarian, in order to provide good service, has to have the ability not only to communicate with the clients of varying backgrounds but also to understand their present needs and anticipate their possible demands in the future. A librarian with basic training limited to humanities or social sciences will definitely have difficulty in serving the needs of

scientists or engineers. By the same token, a librarian trained only in science or technology will have problems in serving the clients of social sciences and humanities. This difficulty is particularly magnified in the environment of research, or special, libraries. Of course, a library school is not a place to train professional librarians solely for research or special libraries where a solid disciplinary background is required. Nevertheless, a general college education should be a prerequisite for all library school students in order to prepare them to carry out their charged missions adequately after they graduate from the library school. Therefore, to place a library school in an existing college such as liberal arts is not desirable.

Library science is rather a unique discipline which has its own traits. The properness, improperness, in developing this particular discipline has a profound impact on the development of the whole society. Proper attention to library education is way overdue in the Republic of China. Further delay in establishing an independent graduate library school would slow down the progress of all disciplines (not only library science) considerably. This year, we are celebrating the 30th Anniversary of the Library Association of China, it is only proper for me to reemphasize the importance of library education.⁸ An independent graduate library school properly designed to meet the present and future needs should be established as soon as possible in the Republic of China.

References

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