

**Semiological perspective
to the organisation of knowledge in museums¹**

by

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Abstract

This paper deals with some characteristics of museum objects within the museological context and it tries to explain reasons why museum information systems are hardly ever covering all aspects of museum work and why it is not always easy to document even the complete physical description of objects in the museum information systems.

Semological concepts were used to analyse the museum object and to determine reasons why its information processing is different from information processing in other fields related to cultural heritage.

The comparison was made between museum object and book in the library in order to see why museum information systems are considered to be more complex than library information systems and still do not share the same standards that would allow simple exchange of information between different museums (although the progress has been made in this field).

Introduction

Different authors working in the field of information science define museums as a specific kind of information system that do not operate with simple data records but rather with 'objects' and 'related documentation', as well as with complex communication processes that take place in museums - within the everyday museum work, and between museums and their public. The diverse processes that take place within the museum institution make museum the complex information system that unites the objects in museum collections, related documentation, exhibitions and related catalogues and other research that takes place in museums.

Museology is accepted as an area in the field of information science and it operates with the information science concepts and definitions such as information, knowledge, system (information system), etc. Buckland (1991) defines information in a threefold way as information-as-knowledge, information-as-process and information-as-thing - defining the first one as one's subjective knowledge, the second as a process of getting informed and the last one as somehow recorded knowledge that can have different forms (simple data such as numbers or figures; text, document that can include also picture or sound; diverse objects; and events that got recorded in an object, picture or experiment). Having included an object as a possible basic unit in an information system he defines museums as a kind of information system that as its basic unit has quite diverse objects².

If we accept Buckland's definition of museum we can look into relation between museum as an information system and the databases that it needs

² Observing communication processes that take place within museum institution we can observe that curators by studying (information-as-process) museum objects (information-as-thing) get their specialistic knowledge (information-as-knowledge). This new information-as-knowledge they record as a new information-as-thing in documentation systems. This recorded information can than be transmitted through exhibition (information-as-process) to museum visitors and it can become their subjective new knowledge (information-as-knowledge).

for its efficient organisation. But first we must look more closely to the features that museum objects have.

Museum objects

Museums collect, keep and research material evidence of cultural and natural heritage through which they aim to explain not only mere objects (units) but different cultural systems, embracing material as well as non-material cultural heritage. For that reason information collected in a research process on particular object transcends the level of physical description of an object and it tries to explain certain cultural phenomena, or even entire cultures to which the particular object belongs or is related to. As museums are dealing with diverse segments and aspects of our heritage this has as a consequence a fact that very diverse objects can be included into the museum collections. This situation puts complex demands on documentation systems that record knowledge about museum objects.

Interesting objects are collected, processes and exhibited. Museum object is a document of certain reality - past or geographically distant one - and it is a basic unit that museums process. The feature that gives to a museum object the attribute of a document of a certain reality is called in the museological literature museality of object (Maroević 1993, 1998). Museality is being identified through the form and material from which an object is made of. It is the characteristic by which one object is selected from its pre-museum environment (its reality) and is being identified as particularly interesting for inclusion into a museum collection (it is in fact its museum significance or meaning). Another concept related to museality is the measurement of our knowledge of a certain museum object called in the museological literature the object's field of indefiniteness/definiteness (Maroević 1993, 1998). The research process on a certain object does not end when that object is included into the museum collection, rather it is a continuous process of learning and documenting the new knowledge into the museum documentation system. It is always possible to discover new knowledge about an object (by discovering what is a specificity of its structure, material, certain techniques used to make it or related historical information about its former

use or owners). Through this process the ratio between object's field of indefiniteness and definiteness changes. Many of discovered facts about object can be found in the curators' articles rather than in the documentation systems that hold only formalised facts.

As we stated that the physical aspect of the museum object is the media through which the knowledge from the past is being discovered it means that **originality** is an important characteristic of the museum object. A copy can embody only the information/aspects that we were aware of when the copy was made. In comparison among many 'original' similar objects we can generate new knowledge about certain style, technique, etc. This new knowledge means recognizing the 'knowledge patterns' that we do not necessarily possess nowadays. The other characteristic of museum objects is their **diversity** - the already mentioned fact was that museum objects could be anything. This is the feature that makes it difficult to define INDOC system³ that will encompass structures necessary to (even physically) describe museum objects in the formalised, uniform way convenient for searching and managing data. These two features are what makes a museum object different from, for example, a book in the library. This brings us to the semiology and its analytical tools that we may use to compare the differences.

Semiology and the museum objects

Semiology applied to museum studies has been used to describe exhibition as a semiotically complex communication process but we shall use it to see what makes information about museum objects so difficult for documenting within museum INDOC systems.

If we have said that museum object is a document of a certain reality than we have implied that it has a function of a sign – a sign is something that stands

³ I use the term INDOC system (information documentation system) in a meaning of the infrastructure that records knowledge in museums that unifies content, (i.e. documentation) with technology used (paper or computer databases). Later on, I use the term INDOC service in a sense of institution processing knowledge such as a library, museum or archive, etc. (or like Buckland's institution as a kind of information system)

in the place of an object and it represents something for someone (Škiljan 1985).

Semiologists analyse sign by breaking it into categories such as signifier – a part of a sign that stands for signified (associated meaning). Signifier is a part of a sign that can be materialised, i.e. the part that is accessible to our senses. Signified is an aspect of sign to which ‘real object’ or phenomenon is being referred to. We can call it also an ‘expression’ and its related ‘content’. Example for this would be a dictionary where a written word is an ‘expression’ and by translating it to a familiar language we can discover its ‘content’.

When applied in an information science analysis another element was added to those two elements of a sign, namely sign vehicle that describes the materialisation of a certain sign (in the above example this would be a paper on which words in the dictionary are recorded/written).

Some authors that are interested in semiology of meaning introduce to ‘expression’ and ‘content’ an additional element of a sign, calling it ‘meaning’. The Croatian semiologist Dubravko Škiljan (1985) defines a meaning of a sign as a process of relating a sign and the ‘real-world phenomenon’. This process happens on an individual level of a person (or group) that either emits or receives a message. A meaning can differ from person to person, or from group to group because person using the sign projects one’s personal experiences to the relation of the sign and the ‘real-world phenomenon’. Meaning can be viewed at the level of different communities that a person belongs to (family, generation, nation, etc.) as they share some common experiences. This shows us that a sign can potentially have indefinite number of different meanings because beside the great number of people that exist, there also exists a big number of social groups that a person can belong to. This means that meaning is being formed in the human communication, i.e. it is subjective (or cultural) interpretation of a sign. We cannot just disregard it as something that does not affect the museum INDOC systems because as Škiljan states “all known meanings of a certain sign form part of experience

that influence the possible future meanings”⁴, i.e. it is a building element in the future production of knowledge.

If we analyse a museum object as a sign, we can say that it has its expression (signifier) – i.e. object itself is a signifier and also a sign vehicle, signified is not easy to determine rather it is substituted with a meaning. The reason for that is that museum object is a sign in its secondary function and it does not have to have communication as its primary purpose. It is easy to determine the content of a book (providing that we know how to read and if we understand the language in which it is written). The meaning of a book can differ for a person in different times of one’s life, so you can love it when first reading it and not find it so interesting 10 years later. Or the book that was owned by its author or some important person can have a special meaning for a museum that wants to include it in its collection and it is not replaceable for some other copy of the same book, although their content is the same (the book is in this case museum object). The chair as a museum object does not have a content but it can have a particular significance and meaning. When we try to determine the ‘meaning’ of the museum object we look at object’s history, function, technique it was made in, material, style, decoration, etc. All these elements could help us determine the meaning of the object but they do not help us determine its content.

Sign is always just the model of a phenomenon that it embodies. It means that it is reduced in relation to the phenomenon. The signs that are signs by its secondary function, and this includes the museum objects, are even more reduced in relation to the real-world phenomenon they represent. At the same time, museum objects at an exhibition, i.e. in the communication process, tend to interpret some cultural phenomenon in its entirety. In the museum communication, object represents different phenomena in different contexts (exhibitions). This means that related documentation on museum object has to record quite detailed information. The problem is how to capture the information that gets generated from the communication context and is not necessarily related with one object only.

⁴ my translation

In analysing the museum object as a sign we can also look at complexity or simplicity of a sign and in possibility of determining the basic signs within the particular sign system, as well as the rules of their combination into the more complex levels⁵. In museum communication such rules are not clearly expressed and there also exist some particular signs with unique structure; therefore, in some cases, impossible to determine what a basic sign is. Also, a museum sign system consists of messages that are organised at multiple levels of meaning and instead of determining the basic sign level we can speak of units that carry the relevant meaning, regardless of the level that transmits it. The description of such a system is always incomplete which makes it difficult when one analyses it in order to model and describe elements that need to be included in the museum INDOC system.

Information in the museum information systems

In an information system whose function is based on a meaning of the object, it is not possible to establish their meaning on monosemic (unambiguous) relations among elements of the system, rather it is necessary to put those elements in context, in order to capture the meaning. So it is not surprising when curators sometimes have difficulties accepting standardised ways of documenting the knowledge about objects, arguing their resistance with the need to be able to document fine differences among objects of the same sort.

The important difference between museums and other INDOC services dealing with the cultural heritage such as libraries and archives lies in the fact that a basic information-documentation unit in a museum, i.e. museum object, has not been transferred into some other communication medium (eg. described by language in the book). Rather it documents its pre-museum reality through its physical structure and form, and related meaning as well, through which we can see (and experience) what the Egyptian mummy was like and not just try to imagine it from its textual description (or sketch or

⁵ Example for this would be that words are the basic signs of a language but not any combination of words makes sentence.

photo). Museum objects are just a silent witnesses and documents of the past and they need to be accompanied by related documentation in which the knowledge that was gained by studying and examining it, is recorded.

When defining the museum information the Croatian museologist Dr. Ivo Maroević says that it is concerned with knowledge about the museum objects and not with the object itself. He defines museum information (I) as a function (f) of relation (R) of form (F) of an object and its museality (M) (in fact its meaning). The formula for that would be $I=f(R/F,M)$ but when interpreting it further he extends it when he says that any change of authenticity of either material (sign vehicle) or the form of an object results in a different museality of object.

This description of the museum information in the INDOC system should be done in a formalised way convenient for searching and managing it within a museum INDOC system. Only then, this becomes a part of the public knowledge. We can say that in the information processing of a museum object it is not possible to separate its expression and its content and meaning, because the equal importance in transmitting the knowledge have the form, material as well as the meaning of the particular object. Depending upon which of the elements constituting the sign is of primary interest in the museum, library or archive, differences arise in information processing of those objects.

The already mentioned features of the museum objects, such as originality and diversity of forms and types, is one difference between museum information system and those of libraries (archives also have original documents but not so diverse in its forms), i.e. the system must be designed in such a way to be able to record quite different information for different objects, yet it still has to have a common structure. Museum information systems must reconcile the need for standardised description of data that enables the efficient searching possibilities and that ensures that all relevant references are received as answer to a query with the need to document the unique features of particular object. Library information system does not have such requests. It has to record knowledge about written (and mostly published) documents and although it records information about the physical

description of publications (such as eg. type of publication, its format, year of publication, etc.), its main interest is a content they contain. So it tries to describe which publications are dealing with particular topics by describing a publication by keywords that relate to its content. Library information systems do not have any interest in the meanings that a publication they possess might have. They also do not generate content related information from the physical description of those publications. This is why museum information systems are more complex from the ones in libraries, in its structural organisation as well as in its scope and coverage.

Museums process information and they produce the new one as well, but it is not always of the same form or media⁶. In museums, information is being used as resource as well as a product so it is important to have an efficient system of managing and organising institution's knowledge. Besides objects in the museum collections, museums possess the related documentation and archives, as well as the specialised library that is also used in interpretation of a museum object and related ideas. To be able to efficiently use all mentioned resources it would be optimal to have one integral system that unites all the mentioned subsystems that contribute to the museum work and that enable the access to information in all those segments.

Unlike the information systems in other fields of business that can contain the exact parameters and when queried give as response the exact and precise information (that can be either true or false), the museum information system classifies objects and as a response to a query, it gives the possible relevant information (i.e. set of data). In this situation, the user makes the final choice of the relevant information from the possible matches. The efficiency of such a system is being measured by ratio between the information found and the relevant information for the user. Lesser the discrepancy between information found and the relevant one, better the efficiency of the system.

⁶ Related documentation can be textual, photography, video, etc., as well as on paper electronic, or some other media.

Another way of looking at the museum documentation (and museum information systems) is by looking at the level of description of the museum objects in it. Maroević makes a distinction between basic documentation and the explanatory one. He defines the first one as a part of object-related information that records information about the morphological description of an object. This kind of information is selective, i.e. it records and describes an object in a systematic and objective way. The latter, he calls explanatory documentation and he says that this kind of documentation is a result of recording scientific as well as cultural information about the object. He uses the term cultural information in a way that was defined by another Croatian scholar in the information science field Dr. Miroslav Tuđman. Tuđman defines the cultural information (he also refers to it as structural information) as information of a specific characteristic. He says that it is a kind of information that in itself has embedded the 'invisible user criteria' i.e. it is subjective and thus not easily searchable because it is not possible to break it down into its structural elements. It is so because of the fact that cultural information reflects relation towards an object in the certain historical moment. In other words, cultural information records system of social values towards an object in the given moment (not necessarily present), i.e. its context. We could say that, in a way, cultural information is a concretised meaning of an object.

Often, cultural information is the criteria for choosing the certain object for its inclusion in the museum collection (or for particular exhibition) but it is not possible to include it in the museum information system. This leaves undefined one part of the museum information system and it remains to be solved how to capture this element that seems to be so important, and to find the appropriate techniques or procedures to transform it into selective scientific information that can be captured in the museum information systems.

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