Where is Childrens' Voice in KO?

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Abstract: The purpose of this paper is to discuss the ethical considerations of knowledge organization systems in light of children's perspectives by applying previous literature from Smiraglia's bibliocentrism (2009), Bhaba's third space theory (1994), Vygotsky's zone of proximal development (1978), and Tennis's ethical rationale (2013). Given that there is a lack of attention and consideration in knowledge organization systems for children, it is not absurd to claim that children in the knowledge organization domain tend to be treated as a marginalized user group. Where can we find children's voices in knowledge organization systems? How were these systems designed? The questions regarding the ethical considerations are discussed. This paper contributes to elevate awareness of current problems in knowledge organization systems for children and bring ethical attention to develop knowledge organization systems for children.

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1.0 Background

There have been few studies regarding knowledge organization systems (KOSs) for children's user groups. Studies range from Book House (Pejtersen 1986) and *Science Library Catalog* (Borgman et al. 1995), to Kid's Catalog project (Busey and Doerr 1993), all of which are relatively old, but major efforts in designing KOSs for children. The International Children's Digital Library (Druin 2005) is considered a more recent project providing a child-friendly interface by including children as design partners. These projects tend to focus on improving OPAC or search interfaces, whereas some efforts in KOSs for children are made in relation to subject headings and classification. For instance, a new categorization system called METIS is also developed for school library practice based on children's information seeking behaviors that have been observed by school librarians (Kaplan et al. 2013; Kaplan et al. 2012). Given that *Dewey Decimal Classification* (*DDC*) was not originally developed for children's resources whereas METIS reflects real voices from children, there has been the movement toward using the METIS classification in school libraries.

Although the ranges of age within a scope of children in these studies are various, given that there is a lack of attention and consideration in KOSs for children, it is not absurd to claim that children in the knowledge organization (KO) domain tend to be treated as a marginalized user group. Where can we find children's voice in KOSs? How were these systems designed? When we design KOSs, we have to consider two components of KO: resources and users. One problem in the development of KOSs is that these two components are not considered in balance. Many KOSs are apt to focus on how to represent the characteristics or the nature of resources than how to reflect users' perspectives in KOSs (Beak and Olson, 2011). However, many KOSs are designed for describing resources for an adult audience, not children's resources. In addition, there is a lack of user studies, especially about children in KO. Beak (2015) described the ontology of children from the literature in children's information seeking behaviors, interface design, metadata, etc. Ontology of children shows

that children are a user group apart or different from adults, with children having specific information behavior and information needs. Nevertheless, KOSs for children seem to treat children like miniature adults.

The purpose of this paper is to discuss the ethical considerations of KOSs in light of a child's perspective when we develop KOSs for children's user groups. The questions regarding the ethical considerations arise from previous literature such as Smiraglia's bibliocentrism (2009), Bhaba's third space theory (1994), Vygotsky's zone of proximal development (1978), and Tennis's ethical rationale (2013). By bringing ethical attention to the development of KOSs for children, I aim to elevate awareness of current problems in KOSs for children.

2.0 Smiraglia's Bibliocentrism

Current KOSs tend to be designed to describe adults' book resources better than non-book, children's resources. Smiraglia (2009, 673-4) suggests ethical issues in describing non-book resources by a concept of bibliocentrism:

> One particularly egregious ethical issue is bibliocentrism—the practice of structuring catalogs for books only, as though we lived in a bibliographic-Orwellian mélange where all resources are equal except books are more equal than all of the other resources … one set of standards is used for books, which are imputed the value "good," while another tier is used for non-books, which clearly are considered "less than good."

Bibliocentrism also hinders describing children's resources such as picture books, children's DVDs, or chapter books. These resources tend to show different characteristics from generic bibliographical information such as title, author, publisher, etc. For instance, a famous children's picture book, *The Very Hungry Caterpillar,* written and illustrated by Eric Carle include an interactive material like punched holes in the different shaped pages (see figure 1). While children read the book, these pages with holes motivate children's reading activity. Therefore, children tend to remember the physical characteristics of this book easily, whereas many children cannot remember the author's name or the title.

Another example with a children's book, *My Dog,* was introduced in Beak's poster regarding children's cognitive processes of physical characteristics of books (2014b). *My Dog* written by Angela Joy and illustrated by Nicola Slater has several physical characteristics. As Figure 2 shows, the shape of this book looks like a dog house. It also has fur in the book cover and inside of the books so that children can touch while reading the book. Two child participants in Beak's study (2014a; 2014b) recalled their memories about this book in order to find the book. What they remembered were three things: 1) the book had a dog that a child called Mr. Doggy, 2) the book had fur that they could touch, and 3) the book was shaped like a dog house. How can these characteristics be described with bibliocentrically designed KOSs? So far, OCLC cataloging records for this book provide this information in note fields (see OCLC Connexion record number 56128259): 1) "Includes fabric patches representing dog fur" and 2) "Shaped like a doghouse with die-cut opening in front cover." There are no specific metadata elements that describe these kinds of information, except a note element. However, Beak and Olson (2011) pointed out the problems of describing non-bibliographical information in a note field in relation to a browsing search. Beak (2012; 2014a) studied children's

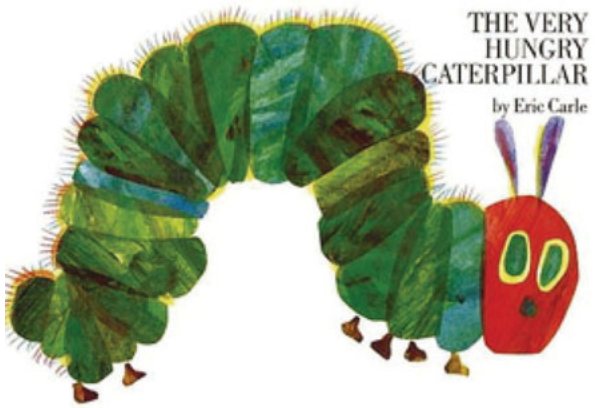

Figure 1. Book cover of *The Very Hungry Caterpillar*

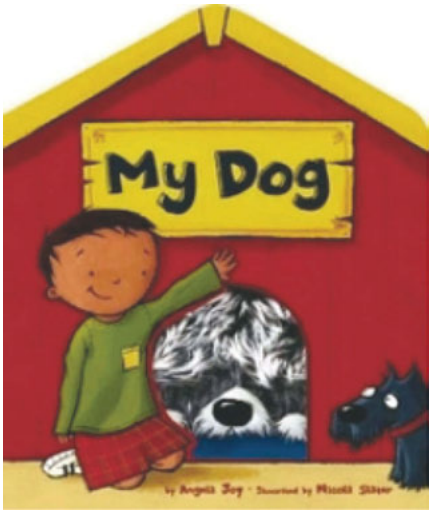

Figure 2. Book cover of *My Dog*

book selection behaviors in order to develop child-driven metadata elements. Children in her studies perceive different elements of books such as illustrations on a book covers, physical characteristics, or characters. More important information to be described for children's materials might not be found in title pages. However, there are no KOSs designed with the explicit input of children or with consideration of the nature of children's resources. It shows that KOSs designed based on bibliocentrism do not reflect children's voice.

3.0 Bhabha's Third Space Theory

Another ethical consideration can be found in Bhabha's Third Space theory (1994), which is based on postcolonialism. Generally speaking, Third Space is a place where meaning is socially constructed (Bhabha 1994, 53):

> Act of interpretation is never simply an act of communication between the I and the You designated in the statement. The production of meaning requires that these two places be mobilized in the passage through a Third Space.

This concept was developed to describe the situations when two different cultural and political groups start to meet and communicate. When a group with more power attempts to dominate or transfer their culture to another group who has less cultural, political, and social power, the communication between two groups are not one-way from a dominant group to a subordinate group. Instead, there happens resistance, negotiation, adjustment, and so on between two groups, so that they create a new context. This socially culturally constructed context is called Third Space. Olson (2000, 65) defines Third Space:

> A statement and its meaning are not the same thing. Meaning is determined not only by the content of the statement, but also by its context … That is, the interpretation of a statement is not just a negotiation between the statement or the person originating it and the person perceiving it. There is a space in between, a context that shapes the meaning of the statement.

Third Space plays a role in bridging between two groups and blending two cultures. Therefore, Third Space is a place of hybridity and inclusion. In a context of KOS for children, KOSs provided in school or public libraries become Third Space between children and information (see figure 3). Children are required to go through socially constructed tools, KOSs, in order to find books. When we consider the library literacy education for school libraries (here children means by elementary school students), school librarians try to teach children how to find books from library bookshelves or in online catalogues. However, call numbers on book spines do not make sense to children. Also, searching books by keywords, titles, authors, or subjects is not an intuitive and easy activity for children. Why do we force children to learn KOSs that do not work easily for children? According to Bhabha's words, we as teachers, librarians, or KOS developers create the Third Space through KOSs. However, these KOSs use languages that children cannot understand easily, and then children are forced to learn these languages to communicate with information. It is clear that there are big gaps between children's languages and cognitive process and languages of KOSs. Many previous studies regarding children's information-seeking behaviors have pointed out children's different information behaviors from adult's information seeking behaviors (Beak 2012; 2014a).

Third Space is supposed to bridge between children's information seeking behaviors and information. However, Third Space for children's KOSs has not been safe space for children to find information. Children are not able to conduct meaningful information seeking activities in this Third Space. Elmborg (2011, 345) mentions that "Third Space provides a concept whereby people with

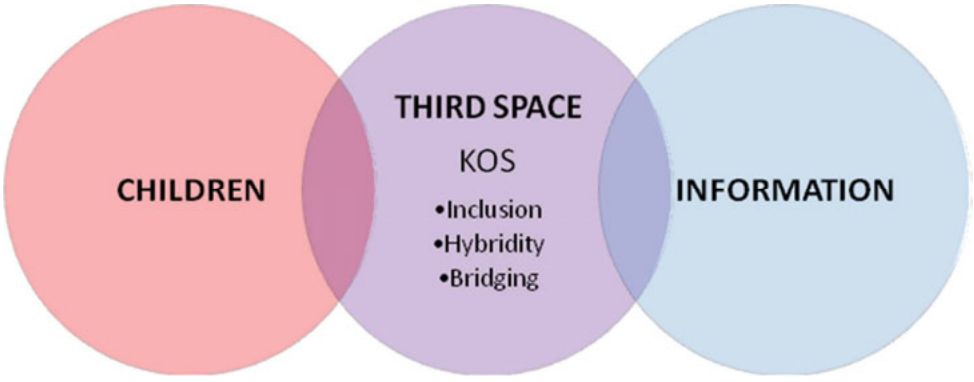

Figure 3. KOS in Third Space

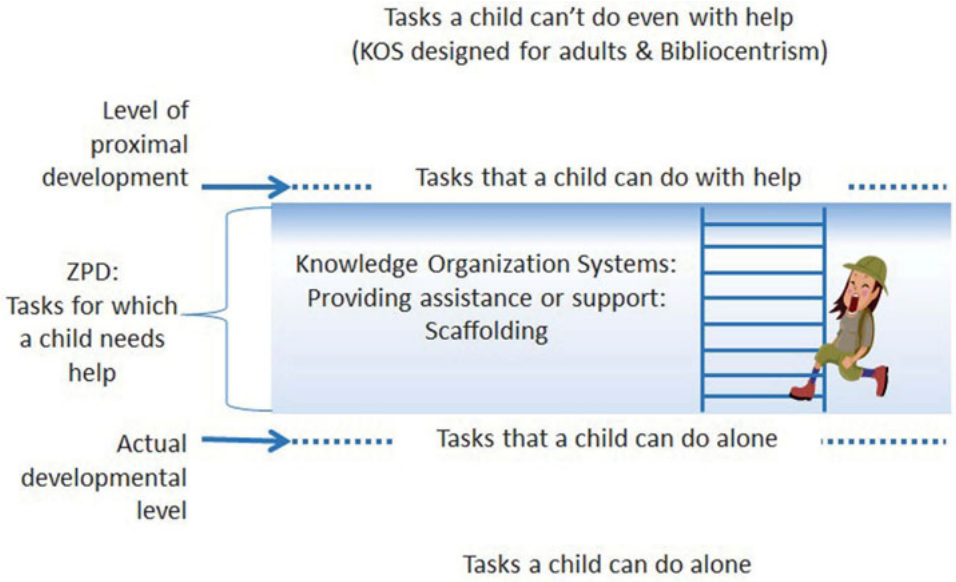

Figure 4. Zone of Proximal Development of KOSs

less obvious social, political, or military power can still exert influence on space by resisting the represented structures of dominant cultures." Children might have resisted current KOSs, which are a dominant culture in KO. However, we haven't listened to their voices carefully. The question then, is that why don't we reconstruct Third Space where it include children's voices?

4.0 Vygotsky's Zone Of Proximal Development Theory

Some will say children are too immature to have their own voice, that adults can speak for children and that children should learn adult systems. Others would say children, to achieve intellectual growth, should be challenged to integrate their empirical experience and intuitive knowledge with experiences imposed on them by adults. To contend with these ideas, I visit Lev Vygotsky's Zone of Proximal Development (ZPD) theory (1978). Vygotsky is one of the most influential psychologists in sociocultural theory. Sociocultural theory claims that users' information behaviors using socially constructed tools like information systems are developed out of a social and cultural context (Sundin and Johannisson 2005). Vygotsky believes that children construct their knowledge or world through cognitive tools formed and provided by society and culture. Through these social interactions, children also assimilate the manner of thinking and seeing the world around them. In other words, society and culture provide a mental lens through which children come to construct culturally appropriate interpretations of their experiences. This contextual view is known as sociocultural theory.

Sociocultural theory claims that our society and culture teach children what to think and how to think. In the context of a library, a KOS is considered a cognitive tool that influences children's information behaviors and learning. If KOSs are not designed for children or according to children's perspectives, what and how do we attempt to teach children to learn? When children go to a library, books are shelved by *DDC*. Children do not understand what those numbers mean. When children try to find books through an OPAC, a system asks children to type a keyword, title, or author's name. What does it mean? KOSs that are socially constructed in a library environment require children to think in the way that the system is designed. It means that as soon as children walk into a library or access a library website (in Bhabha's word, Third Space), they need to change their cognitive processes. KOSs create unique space and ask users to see through their particular thought processes. Similar to Vygotsky, Zerubavel (1997, 15) also mentions a mental lens:

> As we become socialized and learn to see the world through mental lenses of particular thought communities, we come to assign to objects the same meaning that they have for others around us, to both ignore and remember the same things that they do, and to laugh at the same things that they find funny. Only then do we actually "enter" the social world.

Unless children understand and learn how KOSs work through mental lenses, a book that a KOS describes is a different object than a thing that a child means. In other

words, children will have more frustrating experiences in KOSs.

One of the key ideas in Vygotsky's theory is the Zone of Proximal Development (ZPD). According to Vygotsky (1978, 86):

> The distance between the actual developmental level as determined by independent problems solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.

Les Vygotsky emphasizes that in order to improve cognitive development, children need to get assistance or support within the ZPD (see figure 4). The idea of providing assistance or support is often called scaffolding. By bringing Vygotsky's ZPD or scaffolding idea into KOS setting for children, we can consider how KOSs for children have played a role as a cognitive tool or scaffolding. If then, what kinds of assistance or support can a library provide to children? Cognitive tools like KOSs in a library environment mediate children's knowledge and perspective. Then, do current KOSs function well as a bridge between children and information? The answer is clearly no. In other words, although adults try to educate children with current KOSs for the sake of intellectual growth, the tools that we are using do not function well. This means that we need to take action to create a more child-appropriate or child-driven KOS to provide a functioning scaffolding tool.

5.0 Tennis's Ethical Rationale: Action, Intention, & Violence

When we design KOSs, we make many decisions and take many actions. These decisions and actions carry with them an ethical component. Recent few studies discuss ethical components including intentionality (Tennis 2013; Alder and Tennis, 2013). Tennis (2013) proposed ethical rationales such as action, intention, and violence when attempting to design an engaged KO from a Buddhist stance. Tennis's second assertion (2013, 44), "Not taking right action in knowledge organization practice is an act of violence," is directly related to ethical considerations in this paper:

> Violence can be understood as the expression of force against self or other, compelling action against one's will on pain of being hurt. Violence is used as a tool of manipulation. Right action is understood as action for which one is responsible. If one understands the consequences of her or his actions, and they accord with engendering benefit, then the action can be said to be right action. It is the combination of understanding violence (in all its guises) and understanding right action (in what we do and what we chose not to do) that we can reflect on intention in indexing.

Tennis's ethical rationale brings many questions to KOSs. What is the reason that we don't pay attention to developing a child-driven KOS? Tennis suggests five levels of intentionality (2013, 45-46):

1. An action performed without intending to do that particular action without any thought of harming;
2. If one knows that a certain kind of action is evil, but does it when one is not in full control of oneself;
3. If one does an evil action when one is unclear or mistaken about the object affected by the action;
4. An evil action done where one intends to do the act, fully knows what one is doing, and knows that the action is evil; and,
5. An evil action done where one intends to do the act, fully knows what one is doing (as in 4), but does not recognize that one is doing wrong.

What is our intention when it comes to develop KOSs for children? Developing KOSs for a specific user group like children is expensive and time consuming. Therefore, even though we understand the needs of a new or an alternative KOS for children, because of budgetary restrictions we have to force children to use current KOSs? What kinds of action can you carry out? And what is our level of intentionality when carrying out those actions? No matter what the intentions hide, if we do understand what consequences will happen to children when we don't take a right action, it is not ethical KO.

6.0 Conclusion

The intention of this paper is to elevate awareness of current problems in KOSs for children and bring ethical attention to developing KOSs for children. Under the name of information literacy education, children are forced to learn KOSs, which are not designed for children. However, children in early elementary school grades are not able to even learn KOSs. Their cognitive ability is not fully developed to understand logic and rules of KOSs. If this is so, why then do you waste time and energy to teach children the impossible tasks? We should not force children to change their thought processes and use of languages when they come to Third Space. Third Space is a place to create a new meaning by embracing

different cultures and combining them. Therefore, KOSs as Third Space and as a scaffolding tool needed to reflect children's information behaviors and cognitive processes. As Tennis (2013) proposed in nine precepts drawn from Engaged Buddhism, the right action for developing KOSs for children start from understanding children and reflecting children's voice in KOSs. I do not intend to suggest perspective solutions that answer how to develop KOSs for children. However, it seems to be clear that we need more effort to understand children's information behaviors and cognitive processes. Although the number of user studies in KO has been growing, but there is still a relative lack of user studies in KO. Moreover, user studies focusing on children as a group are even fewer than those studying other user groups. In order to contribute to KOSs reflecting users' perspectives, more user studies through empirical data are required.

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