meant "Family" from the 1929 edition to the 1958 edition. It was changed to "Family and its members" in the 1964 edition and has been referring to "Family and kinship" since the 1989 edition. We consider the two cases as word-use change, because the sub-classes do not change correspondingly. There is no structural change. The name changes of class 300 and class 544 do not immediately signal to the cataloger that there are different types of materials under the two classes. One other word-use change is class 363. Class 363 was "Genetics; heredity" from the 1929 edition to the 1977 edition. In the 1981 to the 2001 editions, it became "Genetics; heredity; variation." It changed back to "Genetics; heredity" in the current 2007 edition. Looking at class 363 alone, it seems "variation" was added and removed, thus broadening and then limiting the scope of the class. However, if we look at the hierarchy of class 363 over time, we see that "variation" first appeared in the 1936 edition as 363.1, and has been a sub-class of 363 since then. Whether it appears in the class name of 363 or not, the class for variation (363.1) has not changed. Adding "variation" to the class name of 363 only highlights this concept among other sub-classes of the same level, such as 363.2 "Breeding; conjugation" and 363.3 "Reproduction and sex." Nevertheless, it does not indicate posting-up "variation" to 363. It is important to examine the entire hierarchy when exploring the ontogeny of a class. If we only focus on the name changes of class 363, we may misunderstand the change and categorize it as a structural change instead.

Another interesting case is class 411.91 "Eugenics" in the "Applied sciences." This "eugenics" (優生學) was added as one of the "special topics" under class 411 "Hygiene" in the 2001 edition with a note saying the class includes topics about birth control and abortion. In the 2007 edition, "eugenics" was removed, and the name of 411.91 changed to "Genetic health" (優生保健) with a note specifying that topics about birth control, induced abortion, and family planning are under this class. Based on the notes in the 2001 and 2007 editions, we may infer that the change from "eugenics" to "genetic health" is a word-use change like adding a synonym, because the old and the new classes include very similar topics. However, when we broaden our focus from the class 411.91 to the ontogeny of "eugenics," we have a different explanation. This change is similar to but different from word-use change (Tennis 2007) and splitting (Cupar 2015). In the 2001 edition, "eugenics" represents three document-sets in classes 363.5, 411.91, and 544.45, which correspond to the natural sciences, applied sciences, and social sciences aspects of the subject. In the 2007 edition, "Eugenics" still appears in the "Natural sciences" and the "Social sciences," but its spot in the applied sciences is taken by "Genetic health." The change is not splitting because the materials about "eugenics" did not split into two groups represented by "eugenics" and "genetic health" in the 2007 edition. We can say that the word-use change happened in the "applied sciences" but not at the other two areas. The lack of a mechanism to present this subject ontogeny including the relationship between eugenics and genetic health undermines the *CCL*'s performance in information retrieval. Users who do a subject search on "eugenics" would not retrieve materials about "eugenics" in "applied sciences" that are classified using the 2007 edition of *CCL*, unless the subject headings were coupled with "genetic health." Based on the data, and the relatively short life span of class 411.91 as "eugenics," we cannot tell whether the name change of 411.91 influences cataloging practices. Among the two hundred twenty-two records created from 1985 to 2015, only one bibliographic record uses 411.91 as class number. The data show low application of the class, but the reason for this and its relationship with scheme change remains unknown.

Textual change refers to changes of relationships between an edition of the scheme and a set of texts. Texts can refer to either 1) resources used and often cited to create a class in a particular scheme; or 2) materials assigned under a specific class. The former type of textual change is textual warrant change, and the latter is document-set change (Tennis 2007). In class 360, we see both document-set change and word-use change. The class name is "Biology; natural history" from the 1929 to the 1977 editions. It became "Life science" in the 1981 edition, and changed again in the 2001 edition to "Biological science." In order to arrive at the assessment that we observe two types of change, we examine the hierarchy of class 360 in the 1977, 1981, and 2001 editions. The classes of 361 to 369 are identical in the latter two editions. In the 2001 edition, the scheme explicitly marks the new class name of 360 as a synonym of the old name. We thus consider the change from "life science" to "biological science" to be a word-use change. However, when we compare the hierarchies of class 360 in the 1977 and 1981 editions (Table 2), we identify changes that would affect the types of materials classed under a specific class. For instance, class 367 changed from "Natural history; natural research" to "Ecology." The former has two sub-classes while the latter has eight sub-classes with subdivisions. We can anticipate that the document-set classed under 367 will change drastically after the scheme change. If a library migrated from a 1977 or older edition of the *CCL* to a 1981 or newer edition, there would be two document-sets sharing the same class number. Without a mechanism to present the ontogeny of the subjects this class inventories, confusion can arise and hinder navigation through the scheme.