I. Introduction

The purpose of this small research is to explore and analyze the Powell’s Book site (= powells.com) and to propose an improved one.

The Powell’s Book site has become famous especially to the audience who are interested in buying used or rare books on the web. However, the information architecture of the site does not seem to reflect its reputation very well. Although the Powell’s Book site is commercial, the design of the site itself is very poor, and it will make the customers uncomfortable and will surely affect the profit rate of the site.

In this study, I will analyze the Powell’s Book site based on the following criteria, and also, I will redesign several parts of the site on the basis of them. The criteria that are fused into each analysis are as followings:

i) Navigation
ii) Resolution & Width
iii) Categorization
iv) Color Scheme
v) Labeling
vi) Consistency
vii) Depth
viii) Grouping & Priority

I think that an efficiently structured information architecture should have the structure that sticks fast to the human memory. Therefore, a website that is absorbed into our memory easily and makes us comfortable can be evaluated to be successful. From this point of view, the current Powell’s Book site definitely needs to be improved, and I hope that this research will go forward solving the site’s design problems with the criteria above.

II. Analysis

1. Navigation

The navigation system for a website is like a traffic sign on a road. It means that the top priority in designing navigation is functionality, not the style of it. Navigation, as it literally implies, is the most important guidance to the goal of the site, and thus, it should be analyzed more deeply than other parts. In this study, I will explore the Powell’s Book site with four features, such as consistency, grouping and priority, depth, and color scheme.
1) Consistency

The word ‘consistency’ may be too abstract. Simply, ‘consistency’ in this context means that the denotation of the object is kept from first to last. In other words, although the connotation of the two objects is same, and if the denotation of them is different from each other, the users consider them to be different. As mentioned in preface, web users tend to be cognitive misers, and prefer intuitive objects rather than logically complicated ones. They easily ignore or misunderstand any components that are not in the way of their cognitive expectation. With this kind of point of view, we can pick up three problems that the Powell's Book site seems to have with navigation.

First, it is unclear which one is the main menu. This issue is based on the assumption that there should be a main menu among menus on a navigation of a site. Figure 1 represents the navigation bar of the first page. It shows three levels; the topmost navigation is mainly about users, the second one seems to represent genre of books, and the third one may be about attributes of books and a browsing option.

Figure 1. Navigation bar on the first page

If the order of the three levels is kept through the entire site, we can assume that the second level must be the one that Powell’s people consider as a main menu among three. The affordance of the second-leveled menu is stronger than others. Items on the second level expose the underline that naturally implies that they are hyperlinked. So far so good. However, as in Figure 2. below, the order of three levels changes when users go through other sections:

Figure 2. Navigation bar on the Rare Books page

The third-leveled menu goes up to the second level and the second-leveled one is now on the third level with its own sub-menu. Now the navigation system has four levels. What is worse is that the bottom menu even disappears in a section. Compare Figure 3. with Figure 4. below:
As in Figure 4, the bottom menu suddenly disappears. Our cognitive capacity wants consistency in coloring as well as in spatial representation. In general, human brain’s right hemisphere covers those kinds of visual, non-verbal, and intuitive processing, and if there is consistency in the information to be computed, the benefit of using right hemisphere, that is, being in the long-term memory, becomes effective. On the other hand, if there appears inconsistency in the information, as in the case of Powell’s book site navigation, our brain will call the so-called top-down processing in order to compensate the lack of resources, and it will involve the left hemisphere strongly, and thus, the computation results in the short-term memory or null in some cases. In fact, this kind of problem can be fixed easily. I will provide a revised navigation system in Appendix I of this paper.

Second issue is that there is no way to know where the users are standing. It means that there is no context in the navigation system. When we use a map to navigate in a building, it should mark the exact position where we currently stand. That kind of marking can be implemented into web and we call it a ‘navigation marking’. In most cases, navigation marking is done simply by coloring the current menu differently from others. By the way, there is another way to give the context to the users; history trail. These ideas will be shown on the revised navigation system in Appendix I.

The third issue may be trivial. It is related to the labeling, and the specific one I picked up is the difference between two expressions “kids” and “children’s”. On the navigation bar, ‘kids’ is being used, but in the Aisle directory and in several content pages, ‘children’s” has been used. I checked other Book sites and most of them use “children’s” instead of “kids”’. I do not have an intuition on English, but I feel that ‘children’ sounds more official and formal than ‘kids’.

2) Grouping & Priority
The current navigation does not seem to show the connectivity among items in it and the priority of each item well. For example, ‘Rare Books’ and ‘New Arrivals’ are a book’s attribute rather than a book’s genre, and thus, they should be grouped with ‘Bestsellers’, ‘Sale’, and ‘Used’. Also, “Browse Sections” and “Other Voices’ may need to be handled differently from the current way of grouping.

And, I do not know which item(s) the Powell’s Book site focuses on, but if we think of the usual order of the navigation items in other book sites, and of the users who must become accustomed to it, it would be better for the Powell’s Book site to follow the common order. In fact, ‘Home’ link is positioned on the right-most side, and it will definitely make the users uncomfortable.

3) Depth

We, human beings, prefer simple and neat objects especially when we need to memorize them. Then, what will happen if we encounter a complicated object on the web. Probably, most of the redundant or seem-to-be unnecessary information will be ignored, and we will extract a specific part from the entire body, and get accustomed to it. Later, when we have time and we really need to know about the rest, we will try to get it. Unfortunately, however, the trial version of scenario is not expected to be done by all web surfers. Thus, that kind of user scenario cannot be included into a web project. From this point of view, the depth of navigation in Powell’s Book site should be shallower.

The depth of the current navigation system has four levels, and it makes the top part look heavier than it should be. A ‘heavy’ navigation let the users make their eyes stick on that part visually while surfing the website, and let them rely on it functionally too much. Accordingly, if users cannot find an appropriate result with it, they might leave. They will not try to scan other parts to check if there is another navigation or another way to find more results for themselves. Although the navigation system is big, users only utilize part of it, but rely on it too much, so the result is worse than we expect. Rather, it will be better to have small navigation in two or three different areas on the web site because we want users to move their eyes to other parts, to look around our website deeply, to stay there long, and to read as much information as they can. The common way is to put a navigation for sub-menu on the left side of the web site.

4) Color Scheme

The current navigation system of Powell’s Book site does not have many categories. So, it may be more readable to put each group in its unique color. The following Figure shows that Parent and Child show the same coloring, and thus, the users may be confused with it.

2. Resolution & Width

As the number of computer users increases, the computing environment became extremely diverse. In most cases, this is not a good news to developers who already are in a specific track. As for web designing, The variation of screen resolution is one factor that should be taken into consideration. Today, depending on the computing environment, we can have basically four different resolutions, such as 800*, 1024*, 1280* and 1600*, and the target resolution among them, of course, should be 800*. The problem is that although we can satisfy the users with 800* resolution, we may make other users with higher resolution uncomfortable. If a website does not have much information to show, the margin on the right side will be too wide, and thus, in that case, the center-positioned layout will be preferred. If the website is very much resourceful and the
contents of it is overflowing, specific parts will be built in a fixed width, and the others will be resizable or changeable automatically. The latter is the most common case these days.

The size of the content of the Powell’s Book site seems to fall into the intermediate level, which is between too much and too small. The current site uses texts much, but if they are categorized into well-categorized groups, the overall information will look smaller than now. I think that, for Powell’s Book site, combination of both two ways will fit. For example, the first page will be created in a fixed width. The rest of the site will be done changeable. Since the first page has a specific width, the content of the page should be more compact, and also, the main function of the page should be some kind of ‘branch’ where the users can taste and get a perspective of the whole tree. For accomplishing this, the first page should contain ‘site map’ style content more than now. I will show this with the revised version of the layout in Appendix I.

3. Categorization

As we know, well-categorized information can be kept in our memory relatively long. Once information is in our memory, we can utilize it more quickly and comfortably than before. It is just like a ‘caching process’ between a computer and a printer. Once the document is sent and stays in the cache memory, the printing process is done fast without caring much about where the document comes from.

Likewise, if the content of a website has been well-categorized, the site will be easily absorbed into the users’ memory, and, without being interrupted by Help system or by additional logical computation, the users will accomplish their goals with the site comfortably, and they will return. Thus, the site can be evaluated qualitatively successful through a quantitatively well-formedness. In fact, chunking information is a well-known concept as a mechanism that human uses when digesting information.

In fact, categorization is the way how to label the chunks. Categorization and chunking are related closely, and can be done only by the experts of the area. I am not an expert of book categorization, and thus, I will not be able to propose the best one in this study. However, after checking other famous book sites, there seems to be some general way in which books are categorized. I just assume that the Powell’s Book site has a good and standard categorizing rule for now, and will only talk about the presentation of the categorization.

For example, the site has a directory of aisles, which is sorted by alphabetically. I guess that it is good for the users who can visit the off-line stores. If the aisle information on the web is parallel to the real aisles at the store, any users who also buy books at the store will feel really comfortable. However, most web users will not expected to do that. And, as we discussed, this kind of scenario cannot be generally included into the web project unless the majority is clearly the real off-line visitors. The aisle directory, thus, should be grouped in the format of genre. If it is really needed, there should be a separator between each letter. Chunking information also helps the users do indexing search, and it will make them comfortable mentally and even physically with their eyes.

III. Conclusion

In this small research, I explored the task site “powells.com”, and analyzed it based on the criteria that have been clarified in the Introduction part.

As mentioned before, although the Powell’s Book site has a good reputation as a used and rare books dealer, its web site shows very undesirable architecture. Accordingly, there are potentially lots of problematic issues on the information architecture and designing aspect of the site, and following each criterion, I showed problems and corresponding suggestions. Since navigation is the
most important part of a site, I laid emphasis on the analyzing the Powell’s Book site’s navigation system more than others. And then, I look at the layout of the site considering the amount of information the site conveys in Chapter 2. Finally, I put small talk about categorization and chunking information in Chapter 3.

Although, due to the limitation on the space and on my knowledge, this study does not anatomy the site thoroughly, I did find there are potentially plenty of problems in the architecture of the Powell’s site, and I hope that I will study the site more in depth as my future research.

APPENDIX I

Before1: First page
Hot Titles

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By Elwyn R. Berlekamp

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