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Social Tagging for Graphic Novels: A Content Analysis of Graphic Novel Collections in New Zealand Public Libraries

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Abstract

Research problem: The problem addressed in this research concerns the lack of metadata in public library catalogue records for graphic novels. Although social tagging by library users may help to mitigate this, what kinds of words users might apply as social tags cannot be known.

Methodology: Content analysis was undertaken to examine what social tags were applied to catalogue records for graphic novels from the Wellington City Libraries and Christchurch City Libraries, New Zealand. Based on previous research findings, categories such as topic, character, genre and setting, among others, were used as a basis for the themes of the content analysis. Records were examined, and the tags were coded at face using these categories.

Results: Although the amount of social tags in the records was extensive and provided depth of information, the tags seemed to fit into multiple categories. Topic, character, genre, tags related to awards and personal tags were the most frequently used, with foreign language terms also being common. Reflecting previous research, there was a high degree of polysemy, synonymy, hypernymy and heteronymy in the words used as tags, with the hypernymy providing an inherent structure to the tags.

Implications: Results may reflect the understanding and engagement users have with the items they are reading and because of this may make social tagging useful for other libraries.

Key words: Classification; Social Tagging; Graphic Novels; Subject Headings; Content Analysis.

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2 Problem Statement

The research question for this report asks what kinds of social tags do users apply to graphic novel records in public libraries. The problem examined in this research is the lack of metadata for graphic novel catalogue records in public libraries. Although the Library of Congress Subject Heading schema could be applied here, there are potential drawbacks that may impede its usefulness. A solution to the lack of graphic novel metadata may be to allow social tagging to be applied. This research will use content analysis to examine what types of social tags users apply to graphic novel records from selected public libraries in New Zealand.

3 Introduction

Social tagging has become significant in social media-based websites and has been applied in libraries as a cataloguing and information sharing schema. However, a question is raised on what types of social tagging users apply to graphic novel catalogue records. This report discusses a content analysis of social tags for graphic novel records at the Wellington City Libraries and Christchurch City Libraries, New Zealand. This report is formatted as follows; the *Research Significance* section outlines the research and the *Terminology* section defines graphic novels, social tagging and associated terminology. The *Literature Review* section covers background information and relevant research on the benefits and drawbacks of graphic novels, information on the Library of Congress Subject Headings scheme, some information on Dewey Decimal Classification, and social tagging. The *Limitations and Delimitations* section outlines experimental limits and the *Methodology* section discuss previous themes for the content analysis and research on what words have been used as social tags. The *Data Analysis* section outlines the experimental process and the *Content Analysis* section describes the stages of the content analysis, with findings presented and explained in the *Results* section. The *Discussion* and *Conclusion* sections will close the report.

4 Research Significance

Although studies such as Ajiferuke, Goodfellow and Opesade (2015) examined social tagging in public libraries and research such as Richards and Sen (2013), Spiteri and Tarulli (2012) and West (2013) examined social tagging and graphic novels, the research reported here, as far as can be ascertained, is the first to examine social tagging and graphic novels specifically in the context of public libraries.

5 Terminology

5.1 Graphic novels

Graphic novels, also called “Comic strips” (Weber, 2010); “Sequential art” (Cunningham, 2012, p. 6; Irwin, 2014, p. 106; Marrall, 2016, p.32); “sequential-art narrative” (Bakis, 2013), or “*la bande dessinée*” French for “illustrated strips” (Charbonneau, 2005), among other definitions, are resources that are “book-length” works, groups of stories or, to complicate the definition, sometimes non-fiction (Snowball, 2007, p. 1), an item written and drawn as a comic (Merriam-Webster Online, n.d., in Gavigan & Kimmel, 2013; Weber, 2010) or a writing of fiction, drawn and laid out as a comic and presented as a book (Merriam-Webster Online, in Gavigan & Kimmel, 2013).

5.2 The Library of Congress Subject Headings scheme

The Library of Congress Subject Heading cataloguing scheme, or “LCSH” (Kwan & Chan, 2009, p. 878) is a classification method that was initially created for records in the Library of Congress, made from terms created and managed there (Kwan & Chan, 2009). The scheme was created in the later part of the 19th Century (Library of Congress, 2014; Miksa, 2012; Tonta, 2016, p.3) along with the *Dewey Decimal Classification* system and the formation of the *American Library Association (ALA)* (Tonta, p. 3). The system has been used since 1898 to classify items in the Library of Congress (Julien, Guastavino & Bouthillier, 2012; Library of Congress, 2010, p. 19) and is possibly “the most widely adopted subject indexing language in the world”, used by both larger and smaller libraries and has been translated into a variety of languages (Library of Congress, 2010, p. 19; Library of Congress, 2015, Subject and Genre/Form Headings section, para. 1; see also Chan & Hodges, 2000). Around 1,370 to 35,750 subject headings were created between 2007 and 2016 for the scheme (Library of Congress, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016). As well as giving assistance by listing terms that could be used as headings, LCSH was used as a

benchmark for measuring alike or more detailed lists. Any application for a subject heading to be added to the “Library of Congress...Subject Authority File” is processed by “SACO, the L.C.’s Subject Authority Cooperative Program” (Ferris, 2018, p. 16). Schemes such as the Dewey Decimal System and LCSH are “top-down” classification systems where items are categorized through “a predetermined scheme and controlled vocabularies” which have the advantage of being created by professionals and have a sensible arrangement of “relationships between different headings” (Bowker & Star, 1999, in Waller, 2008, p. 376).

5.3 Social tagging and folksonomy

Social tagging (Al-Khalifa, 2007, p. 22), also known as “*community cataloging*”, “...*social annotation*” (Gerolimos, 2013, p. 41), “social bookmarking” (Rethlefsen, 2007, p. 26; Shiri, 2009, p.902), “social classification [or], social indexing” (Kwan & Chan, 2009, p. 873), amongst other terms (see also Chin, 2013), is the application of key words created by library users about a particular item (Al-Khalifa, 2007; Gerolimos; Golder & Huberman, 2005; Kwan & Chan, 2009; Laspa, 2013; Lu, Park & Hu, 2010; Noorhidawati, Hanum & Zohoorian-Fooladi, 2013; Spiteri, 2007; Stephens, 2007; Weaver, 2007; Yi & Chan, 2010, p. 678). Users can apply words they see as appropriate, as tagging has no hierarchy (Lu, et al.; Mendes, et al.; Schwartz; Terras, 2011) and has a flat “namespace” (Al-Khalifa, 2007, p. 21-22) and is mainly done for personal categorisation and retrieval (Schwartz, 2008). Social tagging is classed as either “broad”, where larger groups of individuals tag a single item, or “narrow”, where an individual or a smaller group of people tag several items (Al-Khalifa, 2007, p. 25). Although being one of the least utilised web 2.0 applications, social tagging has the highest use in more economically and socially advanced nations (Chua, Goh & Ang, 2012, Table 4, column 3, p. 183), in educational, environmental and health organisations (Chua, Goh & Ang, Table 5, column 1, row 5, p. 184) and in other contexts such as

governmental websites and academic library catalogues such as *PennTags* (University of Pennsylvania, 2005, in Stephens, 2007).

A related term, “folksonomy”, also called a “user-generated taxonomy” by Bailey (2007, p.250), is a collection of these social tags (Adler, 2009; Cattuto, Benz, Hotho & Stumme, 2008; Gerolimos; Goh, Chua, Lee & Razikan, 2009; Grady, 2013, p. 13; Kwan & Chan; Mendes, Quiñonez-Skinner & Skaggs, 2009, p. 32; Noruzi, 2007; Spiteri, 2007, p.13; Stephens; Thomas, Caudle & Schmitz, 2009, p. 411; Vander Wal, 2007, Definition of folksonomy section, para. 1) and can also be classified by function such as in the application of social bookmarks in “Del.icio.us”, sharing photography in “Flickr” or by use in current events-based pages such as *Digg* (Al-Khalifa, 2007, p. 22). In contrast to a taxonomy, folksonomy follows a “bottom-up” process, and like tagging, has no specific “hierarchy” (Al-Khalifa, p. 27).

6 Literature Review

6.1 Graphic novels

Comics are said to have begun with the publication of “*The Yellow Kid*” by R. Outcault and became popularised from there, especially in newspapers. It was 1933 when Max Gaines developed comic books by binding copies of newspaper comic strips together in a book format which caught the attention of publishers, who began to request original material in this format (Weiner, 2015, p. XI). The origin of the term “graphic novel” comes from Will Eisner, who used the phrase “a graphic novel” on the cover of his book, *A Contract with God and Other Tenement Stories* (Weiner, 2012, p. 17; Weiner, 2015, p. XII), while trying to convince *Bantam Books* to publish the title. Although Eisner’s request was rejected the term “graphic novel” became affixed (Weiner, 2012, p. 17). Both comic books and graphic novels were becoming increasingly popular in the 1980’s and 1990’s and were added to public library collections at the end of the 1990’s (Weiner, 2015).

Graphic novels have been seen both positively and negatively in some areas. Graphic novels might not be suitable for all ages, with library staff worried about how school leaders, other teachers and caregivers will react if there are comics in the library collection (Lo, et al., 2018). Graphic novels and comics can depict violence and explicit content as their “subversive, rebellious...history are a good media for the expression of these themes” (Masuchika, 2015, p.55). Despite these difficulties, it has been found that graphic novels may entice less willing individuals who, in due course, would make use of library services (Charbonneau, 2005) or to help engage students in viewing science fiction-related media to strengthen their interest in the topic (Subramaniam, Ahn, Waugh & Druin, 2012). Graphic novels have also been stated to “meet users reading interests” and provide historical or biographical ideas (West, 2013, p.303) such as with M. Satrapi’s *Persepolis*, which is said to move beyond being simply biographical, by giving an historical account of life in Persia in

times of political turmoil (Golomb, 2013) and the imagery and writing in graphic novels is analogous to the use of images and text by adolescents to generate ideas and knowledge through social media and the application of graphic novels into a school syllabus could “help...better prepare students for the literacy demands of their futures” (Moeller, 2013, p. 15).

6.2 Graphic novels and cataloguing

Fee (2013) stated that the research on graphic novels and cataloguing focussed mainly on issues related to classification, shelving and the reasons for graphic novel acquisition and could only find a small amount of relevant information in Google Scholar. However, other relevant research and publications have been found and referenced here.

Issues with the cataloguing of graphic novels can occur for several reasons, mostly related to cataloguing processes and the characteristics of LCSH and other cataloguing schemes as well as to the characteristics of graphic novels. West (2013) states that items with “unique publication formats, such as graphic novels, can be difficult to access via online catalogues and other library applications due to cataloguing and classification challenges” and that librarians are struggling to find the most appropriate metadata for “ease of access” (p. 301-302). McGurk (in Viera and McGurk, 2018) stated that, it is difficult to catalogue self-published comics as a lot of minicomic creators leave out information that would be useful for librarians in describing the item; some have no, or fake, signatures and a lot of the time do not name the year of or location of publication. It was inconsistent cataloguing that lead Slater and Kardos (2017) to have issues in finding graphic novels when preparing for the implementation of a “graphic novel collection practice” at *Brandeis University*; it was found that although the appropriate headings were used in the MARC fields for all graphic novels in the collection gaps in some areas of the MARC records were also noticed, with some MARC

titles making it difficult to distinguish if item was a graphic novel or an item that discussed graphic novels as a topic (p. 117).

Graphic novels at the Library of Congress are given a minimum amount of cataloguing, such as an item description, and are stored in the *OCLC*. All these records are given an “inventory control number and collection security” with the LCSH control numbers sorted by age or category of comic using “limited subject headings” for each title (Weber, 2011, p. 16). However, items catalogued using standard cataloguing methods may become mislaid as the terminology and language spoken by users, that is not found with LCSH, is not applied to a record (West, 2013). Although in community college libraries the use of standard cataloguing is best as users are familiar with it and the graphic novels need to be separated to assist in browsing. This may be confusing for customers unaware of this separate collection but the use of “clear classification in the online catalog” and in signs, marketing and efficient customer service may relieve this issue (Finley, 2016, p. 79).

There have also been issues with how graphic novels have been classified. Related to this is question of whether graphic novels should be catalogued as books or by subject (Dickinson, 2007) with Dickinson stating that if being catalogued by subject, it is good to treat graphic novels like any other format as they will “seldom make it from the return box to shelf ” and are regularly taken out by students (p. 57). Related questions are whether graphic novels need to be classed as serials or books (Falk & Hunker, 2010; Sandstrom and Roberto, 2008) and, as graphic novels contain stories that were originally published sequentially, the question of whether to “catalog the series on one record...” or catalogue each of the items separately in their own records (O’English, Matthews and Lindsay, 2006, p. 177). Regarding magazine, “digest” type and other comic book types it was found at the *BGSU– Bowling Green State University* (see Falk and Hunter, Preface section, para. 2), r low publication rates and a lack of “publisher information” was a factor in cataloguing, particularly for “...the

underground/independent titles” while some regular publishers placed “numbers out of sequence, or might have multiple covers of the same issue number” which lead to complications for call number arrangement and, as stated above, problems surfaced as to whether catalogue these items “as serials...or books” (Falk & Hunker, 2010, Challenges section, para. 3).

Other questions have been raised in how to deal with graphic novels that have multiple main creators, including how to figure out who the main creator was and in how to catalogue these items, as each creator may have an individual Library of Congress classification number (O’English, Matthews and Lindsay, 2006). Gavigan (2014), in studying “middle school” graphic novel collections, found that despite trying to keep graphic novels shelved in the same place, survey respondents stated that cataloguing was sometimes controlled by vendors which caused the scattering of titles. Although Goldsmith (2005, p.55) stated that graphic novels that are spread throughout a collection need to be classified in the same way as the resources they are going to be placed with, such as being arranged by author if the other items are arranged in the same way. Although placement like this will inhibit browsing, and may be an unsustainable practice, users could find similar items in a catalogue if format descriptions are present in the “subject headings”.

Using the *Dewey Decimal 741.5* section for arranging graphic novels has caused speculation among cataloguing staff and users. The failure to properly arrange resources impacts the way users seek graphic novels (Pyles, 2012). Rich (2013) stated that there is an absence of standardisation for the classification of *Manga*. With graphic novels being a “‘new’” format that is being driven into older categories and because they are “‘new’, their cataloging is still being worked out” and because of this, graphic novels are being placed in the 741.5 section with collections of volumes that are not comics (Sandstrom, 2008, p. 105). The classification “reflects aspects of the material’s format and brings all materials of a

similar format together within a larger collection”, the 741.5 section is seen to be too wide for classification, identifies only particular shared aspects and has problems with differentiating independent works from those from a series illustrated by different artists or from a collected series of “discrete moments of a comic strip...between fiction and graphic novel–style nonfiction and in the differences between comic strips, comic book serials, graphic novels, and information about working in one aspect of graphic arts” (Goldsmith, 2005, p. 55), although Satija (2013, p. 286) cites *New features* stating that updates were made to the section in 2011 in order to enhance “ ‘currency and accessibilities for classifier’ ” [sic]. Related to shelving and categorisation, Issues may also arise when a “creator team” is changed or items are subtitled instead of being given a volume number, such as the instance with *DC Comics* who changed authors from T. Bedard to G. Simone. This author-based classification can split the location of a title to different places even if the graphic novel section comprises a small set of shelves and the title sequence can be altered if shelving is done by subtitle, but the efficient use of MARC and viewing graphic novels as “trade collections” may help with these issues (Fee, 2013, p. 37). However, MARC is not comprehensive enough for “describing highly visual resources” particularly when related to the search methods of readers and those studying comics (Culbertson, 2016, p. 163). Although Fee stated that comic book readers have different search requirements than regular users, so it is more beneficial to apply more information to a record.

The textual and graphical format of graphic novels can also make them difficult to catalogue (Wright, 2014). Comics and graphic novels fall into the category of “graphic narrative” and differ from visual cartoons. Although they share a similar visual style they use “different visual codes in order to tell a story and are different in the way the audience experience them” (Petersen, 2010, p. XV). Graphic narratives have a reading speed that is more similar to reading a book than watching a film where pace is determined by the method,

although graphic novels are read differently from a book as they are not always read linearly (Petersen, 2010). The physical aspects of graphic novels effect their shelving. Graphic novels may be “folio” sized but thin or have a smaller “surface area” but be thicker. These issues, however, can be managed by considering where the items will fit, if there is enough room and equipment for a “face-out” display and if items can be ordered so that users can find specific titles (Heaney, 2007, p.75).

6.3 Library of Congress Subject Headings

The structure comprised in LCSH is important to describe as it relates to efficacy aspects of the scheme. This structure is as follows; major headings are related to two distinct LCSH-based structures “local level and a global level”. Local level structures refer to lists of headings that are hierarchically related to the headings “above and below in their hierarchical position” and although local and global-level structures are alike, a “global-level hierarchical structure” has headings that “are hierarchically related at one or more levels” (Yi & Chan, p. 680). Further divisions include “*Local Relational Structure*”, or “LRS”, made up of a core heading and the keywords equivalently, hierarchically and associatively related to it and “*Global Hierarchical Structure*” or “GHS”, “a display of a group of preferred subject headings that are hierarchically connected to each other directly or indirectly”. As the relationship among Library of Congress Subject Headings is shown in an LRS, a Global GHS can be developed from them. A GHS is a series of every likely LRS that are linked to one other through “BT/NT relationships”– meaning “Broad Term” and “Narrower Term”. A Global Hierarchical Structure can then be illustrated as a “tree node” where “broader terms are denoted by the *parent*...nodes of established terms, and narrower terms are represented by the *child* nodes of established terms” with “sibling nodes” being headings at the same level (Yi & Chan, p. 680-681).

Similar to this is “syndetic and semantic structure”, the connections meant to guide users through the terminology and “promote match between query description and match description— discovered and constructed as a result of using “facet analysis” for thesauri (Schwartz, 2008, p. 833) and, for LCSH, is described as “the sum of relations between main headings as defined in the authority records (Julien, Guastavino, & Bouthillier, 2012, p. 151; see also Julien, Tirilly, Leide & Guastavino, 2012, p. 2406). In the “...syndetic system” of LCSH, related words, synonyms or alternative phrases are connected through cross-referencing and refers users from unauthorised phrases to an acceptable heading. Online catalogues supply “ ‘see also’ ” and “ ‘use’ ” references for users to choose the approved terms for searching (Adler, 2009, p. 313), although Schwartz says that research by Michel found that many more types of these “relationships” exist (p. 834). In bibliographic records subject headings are also linked to lists of resources with these same headings (Adler, p. 313). An example similar to this is with the social tag “ ‘fantasy’ ” as shown in Figure 3 (p. 39). Syndetic structure has origins in Cutter and his approaches to cataloguing. Cutter felt that “cross-references” were needed for “the dictionary catalogue” as they not only connected the alternative names of people, corporations and other entities “in its author and title parts” but clarified similar subject terms based on their “logical hierarchical relationships” and “that they had virtue of their membership in the larger schema of classed human knowledge. Cutter called this principle the “ ‘syndetic feature’ of his dictionary catalogue” and based it on his knowledge that having cross-referencing was important for users to find resources on the same subjects and of the literary type grouped by class and not only on his understanding that alphabetical subject catalogues often had no cross-referencing in the first place. To a smaller degree, this cross-referencing was also useful in helping some catalogue users “find those classes further linked to still other related classes in a hierarchical classificatory structure” (Miksa, 2012, p. 10). Syndetic structure needs to be improved and maintained as new terms are added to a Subject Heading Language (Sauperl, 2009, p. 826).

The usefulness of LCSH has been debated for some time due to the popularity of *Google* and the use of keywords as a major search technique (Strader, 2012) and despite the influence LCSH has there are weaknesses with the scheme. Ferris (2018) stated that the difficulties of the subject heading application procedure in combination with the long-standing reputation of LCSH can be daunting. The Library of Congress Working Group on the Future of Bibliographic Control (2007) state that “the complexity of LCSH, in combination with its idiosyncratic updating and the seemingly capricious limitations on its application, have negative consequences for both catalogers and catalog users” (p. 31). Small libraries adopted “the *Sears List of Subject Headings*” as LCSH was too complicated and expensive for them to use (Satija, 2008, p. 32).

Regarding its application in searching, people often use key terms or phrases they consider relevant to their knowledge requirements and will also try searching using other terms in the hopes that they match the terms listed in the metadata. In this situation, searching will only be successful if the user-generated terms match a subject heading and “unless there is an alphabetized list of all the indexed subject headings within a system the user more often than not fails at this hit or miss method” (Walsh 2011, p. 333). Related to this, users looking for relevant information have to use the terminology used by the library, which necessitates a cooperation between library staff attempting to “predict their user’s interests and vocabulary” and the patrons who are attempting to understand the subject terms and coding in the catalogue, arrangement and “bibliographies”, a process that can become difficult with “increased scale” (Buckland, 2012, p. 155).

Language problems are also an issue with LCSH. Despite Chan (2000) stating that LCSH had control of synonymy and homography – “A homograph” being a sequence of terms that have multiple meanings (White, Willis & Greenburg, 2014, p. 319) and “polysemy” being one word that has many different meanings (Tommasel & Godoy, 2015, p. 416) – recent

research has shown that LCSH can be affected by these problems (Yi and Chan, 2010, p.685). Although the use of thesauri can help to reduce these effects (Hudon, 2006, in Ménard, 2010). In discussing a feminist critique of classification, Olson (2007) says that LCSH classification has “structural problems, such as topics relating to women and minorities being subsumed under mainstream topics” and the neglect of certain topics stemming from the lack of hierarchy for them. Similarly, Deodato (2009) cites Berman (1993), who stated that LCSH and its syndetic structure are biased due to LCSH reflecting “the values and worldview of only a subset of its inhabitants” (p. 738). Although Knowlton (2005, as cited in Deodato) found that Berman’s suggestions for reducing these biases and prejudices were partly or fully applied, there were biased headings relating to the topics of religion, American history and geography. Deodato describes further research showing that biases were still evident for certain subjects and a domain analysis by Fortier and McTavish (2011) found that, when compared to “the Répertoire de vedettes-matière (RVM) de l’Université Laval on sexual health topics (Background section, para., 1) found that LCSH has a narrower conceptualisation with the topic “ ‘sexual health’ ” only being related to one concept and, reflecting earlier (and later) research by Olson, say that “literary warrant in LCSH introduces American bias into the indexing tool and then “only when it echoes a mainstream viewpoint” (Results section, para., 1).

The “hierarchical structure” of LCSH could also cause issues; large “GHS trees” can cause problems if the structure is too complex to comprehend or manage, or when “the hierarchical relationship between two terms shown at a considerable distance within the tree is too weak to be useful”. These problems appear when subject headings are applied without considering “their hierarchical positions” relating to the GHS of the LCSH (Yi & Chan, 2010, p. 686). Mak, Higgins, Collie & Nicholson (2013) noted that the granularity of LCSH may mean the links in an “Electronic Theses and Dissertations (ETD)” set (Abstract, p. 284) can

become cluttered. LCSH also has issues with name creation as guidelines do not illustrate, for example, what a “family” is comprised of or what differentiates each family and that names could or could not overlap is also an issue (Creider, 2007). A similar issue was found by Farris (n.d., in Lee, 2011) who stated that LCSH was erroneous and unsuitable for describing “Aboriginal materials in a Canadian context” (Introduction section, para. 2). Discussing the experiences of leading a young adult book club, with a mixed-ethnicity membership, and relating to aspects and examples of racial identity, Kumasi (2014) noted that Library of Congress Subject Headings had irregularities when classifying works written by “people of color” or had illogical naming practices necessitating separate searches for “ ‘short stories, African Americans’ or ‘short stories, blacks’ ” (p. 12). It has been suggested that “hierarchical taxonomic and classification structures” have no way of acknowledging “the vague and often flexible identities” of individuals (Roberto, n.d., in Samek, 2011, p. 13), with comments from a survey assessing the proficiency “and comfort level of librarians” on assisting with sexuality and gender-related reference questions suggesting that the LCSH was inefficient with “queer and transgender related topics”, limiting their findability (Hawkins, Morris, Nguyen, Siegel & Vardell, 2017, p. 322), this issue was also highlighted by Roberto (2011) who states that the language used for subject headings and terms for *LGBTQ* persons is imprecise and are unconsciously antagonistic to these people and found that, under the Dewey Decimal system, although certain topics are classified appropriately there was no indication “that drag performances are to be placed here, with only one marginal note leading to this number...Drag kings and queens are removed entirely from any sort of queer context...” although improvements to the system were being planned at the time by “the Dewey editorial team...[and] Joan Mitchell, editor-in-chief of Dewey Decimal Classification” (p. 61). While schemes such as LCSH and the Dewey Decimal Classification system are used extensively with “music resources” the schemes have trouble accommodating “ ‘new’ ” music and other musical experimentations” with Nero (2006) saying that Library of

Congress Classification numbers have been offered for classifying music resources from Trinidad and Tobago but are not specific enough, for example.

Despite this, the LCSH scheme does have benefits. As LCSH is made up of subjects applied by cataloguers or subject specialists it allows for “high-quality access points” (Diekema, 2012, p. 170). Subject headings are still significant and are maintained as a valuable way of extension or limitation and offer “interoperability with collections beyond the local context” (Mak, Higgins, Collie & Nicholson, 2013, p. 286). Walsh (2011) states that because controlled vocabulary has significance, that LCSH has high interoperability, has specific criteria and recommendations regarding its use and “that many collection creators are also librarians” are the primary reasons for the use of LCSH with digital resources (p. 330) and says that LCSH has “synonym and homograph control not found in other controlled vocabularies” because of the strong links of its “syndetic structure, through cross referencing” that signifies connections between terms using the broad, narrow, related and use structure (p. 332). The benefits of syndetic structure are noted by Carlyle (2010), who says that “the syndetic structure provided in tools such as LCSH facilitates movement through hierarchically arranged terminology” (p.127). Chan (2000), says that controlled vocabulary acts as the link between “searcher’s language and author’s language (Verbal subject access section, para. 3) which, in referencing Chan, McCutcheon, Kreyche, Maurer & Nickerson (2008) said this is due to “the supporting syndetic structure in such systems” (p.42-43).

6.4 Social tagging and folksonomy

Social tagging had its foundations in computing applications such as *Sysop* that saved the terms users added to their files that were sent to “Compuserve forum libraries”, and with *Bitzi* in the end of the 1990’s and the beginning of the new millennium which “provided volunteer contributed tags and descriptions” although the programme had no way to comprehend the meaning of a user-applied term (2007, background section, para. 1). In 2003 the website *Del.icio.us* was introduced, which used social tagging and “included identity in its social bookmarking” which allowed users to identify the creator of particular tags and the items they have applied tags to, which resolved the definition issues in *Bitzi*. Social tagging was then implemented in the early developmental stages of photographic sharing website *Flickr* (Vander Wal, Background section, para. 2). Social tagging is also popular on the websites *Amazon*, *Wikipedia* (Yakel, 2007, p. 160), *LibraryThing*, *Goodreads*, *Bibliocommons*, *SirsiDynix*, *Encore* (Spiteri & Peckoskie, 2016, p. 91-92), the streaming media websites *YouTube* and *Last.fm* (Goh et al. p. 570) and is viewed as one of the most well-regarded web 2.0 applications by library school students (Davis, 2009). In research by Richards and Sen (2013) on the use of *LibraryThing*, in a survey question asking about the reasons for its use, a respondent stated that it improved access to the “ ‘collection [of]...graphic novels and manga that is poorly served by a traditional library catalog, namely...” (p. 503).

Social tags are often personal (Adler, 2009; Mendes, Quiñonez-Skinner & Skaggs, 2009; Weaver, 2007) with Library 2.0 applications letting users generate personal subject headings for resources through tagging-based websites (Zimmer, 2013). In the social tagging literature, terms relating to characters, settings (Carmen, 2013; Desrochers, Laplante, Martin, Quan-Haase & Spiteri, 2016; Weaver, 2007; West, 2013), nouns, “compound tags” (Guy & Tonkin, 2006, “Tagging Observed” section, para. 6; Grady, 2013, p. 53; see also Benoit, 2014), words that are associated with an emotion, known as “emotive verbs” (Aarts, Chalker & Weiner,

2014, p. 137), plot details (Adler) and opinion-related words are common tags. Examples include tags applied by readers of Dan Brown's *The Da Vinci Code* that were based on characters, locations, emotion and opinion (Weaver, 2007; West, 2013) similar to Desrochers, Laplante, Martin, Quaan-Haase and Spiteri (2016) who found, over three case studies, tags applied by users were associated with genre, personal opinion, author names, characters, settings, emotions, time period, categorical names or particular topics, among other aspects (Table 1 p. 1034, Table 4, p. 1036, Table 5, p. 1037, Table 6, p. 1039) as well as time-based tags as found by DeZelar-Tiedman (2011) in examining LibraryThing and "University of Minnesota Online Catalog, MNCAT" tags (p. 225). In the second part of Spiteri and Peckoskie's (2012) study, which focused on the "nature" of emotion-based subject matter in user evaluations, it was found that users applied a range of emotion-based "access points" for the resources in the sample, comprising seven to eleven basic types of emotions and around 30 to 150 specific links, tones, or feelings (Spiteri & Peckoskie, 2016, p.93). In surveying participants as part of research on the application of social tagging to a digital academic library thesis repository, Noorhidawati, Hanum and Zohoorian-Fooladi (2013) found that user preferred to use "personal tags" most often with results showing that participants used social tagging for additional purposes and for information sharing with others, respectively (Have Not Used Social Tagging/Bookmarking Before (N=16) section, para. 1).

Similarly, a Masters research report examining if similarities occur between *LibraryThing* tags and Library of Congress Subject Headings explored what ideas are exemplified by LibraryThing tags that are not included by LCSH or OCLC (Carmen, 2009) found the most common tags were associated with "Plot details", "Literary genre" and personal or "User-specific" tags, respectively (Carmen, p.28) with other tags relating to general information such as " 'hugo award' " or " 'nebula' " for award-winning resources (p. 31), information on the format of an item as well as "Place and character name..." (p.32). Spiteri (2006) found

that on the social tagging website *Del.icio.us* all tags were associated with computing and information technology, whereas the percentage of computing-related tags on the websites *Furl* and *Technocrati* were 63 and 38 percent, respectively. Of tags that were used only once, the remainder of tags in *Furl* and *Technocrati* related to locations, individuals and businesses, with the tags on *Technocrati* being focused on news stories. In other research “Compound tags” and phrases using American and British spelling from English dictionary phrases were the most commonly applied terms for tags in Flickr and *Del.icio.us* (Guy & Tonkin, 2006, “Tagging observed section”, para. 6), with “compound tags” being a combination of various words with “strong semantic ties” that can represent one topic or “phrases and proper nouns in natural language” (Grady, 2013, p. 53).

In examining “unique” tags— instances where tags only occur once— on the websites *Del.icio.us*, *Furl* and *Technocrati* over a 30-day period Spiteri (2007) found that 49 percent of tags in *Technocrati*, 22 percent of tags in *Del.icio.us* and 14 percent of tags in *Furl* were unique, with some tags were used more than others and tags on each website related to a particular topic; all tags in *Del.icio.us* related to computer science, compared with 63 percent in *Furl* and 38 percent in *Technocrati*, with the remaining unique tags in *Technocrati* and *Furl* relating to locations, individuals and businesses, with the *Technocrati* tags focussing on “current news events” (p. 18) with almost all the tags over the three websites, being nouns or noun types although adjectives, adverbs, and a small percentage of “Noun phrases—Premodified” and “Noun phrases—Postmodified” type words were also used as tags (Table 2, p. 19). Other research has found similar results with nouns making up most of the tags, with “singular” then “compounds” of tags already applied, plurals, jargon and slang being the next most frequently occurring (Thomas, Caudle & Schmitz, 2010).

Certain benefits have been derived from social tagging. Schwartz (2008) states that, from a user point of view, tagging is inexpensive, aids in chance discovery of information and in

community connections and has “a low entry barrier”, along with the main information retrieval objectives (p. 837). It has been suggested that social tagging and folksonomy could be used to support LCSH or controlled vocabulary records (Carmen, 2009). Spiteri and Peckoskie (2016) suggested that social tags and user evaluations could be useful as “access points” for finding resources (p. 92). In the first of a two-part study, on the possible value of social tagging for Readers Advisory, Spiteri and Peckoskie (2012) found that social tags and customer evaluations covered information relating to the mood of collection items, which is an aspect not conveyed through LCSH. Information retrieval research has also applied social tagging, with many varieties of information retrieval software and programming for different purposes, all with their own strengths and weaknesses (Lee, Masoud, Balaji, Belkasim, Sunderraman & Moon, 2017).

Social tagging has also been seen to be beneficial to users in educational contexts. For example, based on learning activities and the dialogue between learners, Klašnja-Milićević, Vesin and Ivanović (2018) proposed a mixed methodology that aimed to extend the potential of standard “recommendation methods” in electronic learning programmes and environments, which was made up of social tagging methods and the “mining of sequential patterns” to suggest the best ways of navigating through study resources for individual learners (p. 166). They concluded that tagging has been shown to be a “a meta-cognitive strategy” involving learners in active learning and more effectively engrosses them in their learning activities. Social tagging may also help improve learner memorization by indicating important parts in a piece of writing, encourage users to think when applying further ideas to the item they are reading and may help them clarify and understand what they are learning while they are restructuring the information. Learner-created tags could also produce a vital trail for others to use, as tags document user opinions about an item and could provide more easily understood suggestions on the learning process taking place (Klašnja-Milićević, Vesin &

Ivanović, p. 179-180). In Noorhidawati, Hanum and Zohoorian-Fooladi's (2013) investigation of the applicability of social tagging, further survey responses to questions based on Kirakowski and Corbet's "Software Usability Measurement Inventory" (Kirakowski & Corbet, 1993, in Noorhidawati, Hanum & Zohoorian, Research Objectives and Method section, para. 4) were favourable, with participants indicating tagging was easy to use and good for later retrieval, sharing and access and despite some apprehension around the application of incorrect tags, the use of tag clouds, the reasons for needing to apply tags and the time tagging will take, data showed that most responses were favourable for questions relating to "Affect", "Efficiency", "Helpfulness", "Control" and "Learnability" (Noorhidawati, et al., Examining the usability of social the tagging application section, table 8). In tertiary education, user groups with similar interests can use social tagging services to add information to "open knowledge of common interest" which may facilitate the dissemination of educational works (Lee & Ge, 2010, p. 622). As public library communities are comprised of users of varying ages, ethnicities and backgrounds and that public libraries offer resources on continuous learning, topics and activities of personal interest, personal skills, cultural pursuits, school work, the development of language and assure that every person has access to the information required to "grow and fulfil their potential" (Chamberlain, Chamberlain, & Cabaral, 2007, p. 68) then having a system such as social tagging that reflects their language may be helpful in information searching.

Social tags can offer ways of finding information; instead of having to know the correct LCSH subject headings social tagging can be used, which offers a persuasive means for user access as well as the possibility that catalogue records will be improved by subject specialists if tagging is implemented (West, 2013, p. 315). If libraries use the subject knowledge of their customers then tags can be created that improve access to internet catalogue resources (West, p. 305). Due to their malleability, folksonomies can be a substitute for controlled vocabulary

or a way to augment them (Pirmann, 2012) with Halpin, Robu and Shepard (2007) saying that social tagging systems have a higher level of “malleability and adaptability in organizing information than do formal classification systems (p. 211). The social tagging-based website *Library Thing for Libraries* is a means of “finding books outside of traditional keyword, author, title, and subject heading searches” (Westcott, Chapell & Lebel, 2009, p. 80). Social tagging can offer a remedy to the issues posed by time-constrained subsidization for digitisation projects, a solution for the lengthy process of developing expert-created metadata, offer a means to empower customers in the use of archive or museum web pages and aligns with “the ‘fitness for use’ ” reasoning of sponsoring organisations (Van Hooland, Rodríguez & Boydens, 2011, p. 712). It may also help to alleviate issues of cost, delay in adapting new ideas an item-focussed rather than user-focussed indexing method in “Knowledge Organisation Systems... (KOS)” (Golub, Lykke & Tudhope, 2014, p. 801-802). The aspect of the “long tail” has also been discussed in the literature, with some research showing a floor effect in the distribution of the data. The concept of “the long tail” was first developed by C. Anderson in the book “*The long tail: What the future of business is selling less of more*” and is developed around a power law that emphasises “distribution and popularity ranking”. Here, although the most popular resources are found at the head of the distribution the items in the “tail”, combined, have the highest number of frequencies (Oliphant & Shari, 2017, p.431). In examining the characteristics of the long tail in relation to user searches, Oliphant and Shari conducted an analysis of search enquiries at the Edmonton Public Library and found that the majority of phrases and words from searches were found in the long tail and that the infrequently searched terms from a wider variety of subjects were “searched for 75-85 per cent of the time” (p. 436). Related to this, in comparison with LCSH, it has been found that the “long tail afforded by folksonomies” allows a space where individually-created terms can be used to generate and enable growth, information sharing and adaptations as it develops into a shared language, whereas the Library of Congress, being a government organization,

contributes to and endorses “ a mainstream discourse” that frequently obstructs the areas where individual labelling occurs (Adler, 2009, p. 312). Related to this is the finding that some tags follow a power law, and are called “ ‘power tags’ ”, the determination of which is dependent on the distribution of the tags in relation to the amount of times they are applied for a digital item, with the supposition that different tag distributions could emerge in folksonomies (Peters & Stock, 2010, p. 82) resembling a power distribution like “Zipf’s Law” (Huang, 2006, p. 14) an “inverse logistic view” (Stock, 2006, p. 1126) or other distribution types (Peters & Stock, p. 82). It has been found that adequately large folksonomies are likely to have a logical classification scheme coming from the tagging where the tags follow a power law arrangement “that shows a statistically reliable agreement in the evaluation of a resource, particularly between taggers and searchers” meaning that browsers expectation of a tags meaning is a “reliable indicator of the intended meaning of the taggers” (Basile, Peroni, Tamburini & Vitali, 2015, p. 499).

However, social tagging does have weaknesses. Like with LCSH, it has been found that tagging is affected by grammatical issues, particularly “homonymy and polysemy” (Golub, Lykke & Tudhope, 2014, p. 802; Mendes, Quiñonez-Skinner & Skaggs, 2009) and, despite the benefits described above, the possible applicability of social tagging in knowledge organisation systems can be diminished due to the lack of regulation for what words are used as tags and from having no means for managing “homonymy and polysemy” (Golub, Lykke & Tudhope, p. 802, 804). This contrasts with LCSH which, although having the same language issues as social tagging, uses subject headings and “subject stings” based on those from “the LC authority records” (Julien, Guastavino & Bouthillier, 2012, p.150) with further Other grammar-related issues include “synonymy”, where different words have identical or nearly identical meanings, which causes issues because the variation in the words used as tags makes it hard for users to be certain they have found all the relevant terms they need (Noruzi,

2007, “Main problems of folksonomy tagging” section, para. 4) and introduces obscurity to tag definitions (Halpin, Robu & Shepard, 2007; Mathes, 2004). The credibility of user-supplied information can sometimes be debateable as not all existing information on a resource is obtained and described by users and the fact that social tagging has no structure can reduce its applicability, although “they are a best-case provision of basic metadata for resource discovery” (Terras, 2011, p.697).

West (2013), in examining “resource format and access” and the use of social tags applied to graphic novels in academic libraries (p.308) found, in some instances, that the application of “tag clouds” in database “discovery tools” became too complicated which made the retrieval process inadequate due to the system not focusing on the tag “graphic novels” and instead focusing on associated terms and searching over the whole record instead of only those on graphic novels (p. 309-310). Tags were also found to complicate word structure, although word meaning is briefly disestablished then re-established the “new” word may or may not necessarily “resemble the original meaning”, with attempts at streamlining tags essentially imposing a structure (Murphy & Rafferty, 2015, Abstract section, p. 477).

6.5 Comparisons between social tagging and controlled vocabulary schemes

Many studies have compared Library of Congress Subject Headings and social tagging (Adler, 2009; Clements & Liew, 2016; DeZelar-Tiedman, 2011; Gerolimos, 2013). Thomas, Caudle and Schmitz (2009) examined the degree to which LCSH were emulated in folksonomy to see if it efficiently supported catalogue created subject headings, from resources in “problematic subject areas” in libraries using both LCSH and social tags (p. 416). Carmen (2009) examined the degree to which *LibraryThing* tags matched corresponding LCSH terms and whether further topical information about the tagged resources is offered. Murphey and Rafferty compared social tags from LibraryThing and a “library OPAC with Library of Congress Subject Headings (LCSH) and publishers’ descriptions to examine the association between social tags and “key poststructuralist principles” (Abstract, p. 477). Adler (2009) examined the benefits and drawbacks of both LCSH and folksonomy in subject headings for gender-related topics, Rolla (2009) compared the differences between user-created tags and subject headings, the potential for tags to improve access and if tags can offer an insight into reader opinions which could help to improve “library-supplied subject access...” (p. 175) and part of Spiteri’s (2007) research examined the differences and similarities of folksonomy structure with respect to the rules applied in the development of controlled vocabularies.

Other research has compared social tags created by professionals versus users (Benoit, 2014) or has examined how similar and different tags from a “social networking” website in comparison to LCSH for a catalogue were (DeZelar-Tiedman, 2011 p.222). Part of a study on implementing LibraryThing for Libraries in an academic library compared LCSH and LibraryThing tags (Mendes, Quiñonez-Skinner & Skaggs, 2009). Part of Lu, Park and Hu’s (2010) research examined if social tags and expert-generated metadata have a similar language and if “expert-generated subject headings” and tags complement one another (p.

765). However, West (2013, p. 305) states that if tagging “is going to be truly complementary to cataloging” academic staff, general staff and students would need to have a “vested interest” in participating in it.

7 Limitations and delimitations

At the time of writing, as far as can be ascertained, this study is the first to examine social tagging for graphic novels specifically in the context of public libraries. This research does not compare social tagging with other classification schemes and the library users who applied the social tags are not identified. This research focussed on the collections from two public library franchises in New Zealand and may not be applicable to other libraries. Social tags were categorised at face value rather than following the links to lists of related resources, accessed by clicking on a tag, as it was felt that accessing this information would introduce bias during categorisation (see figure three). Limitations include how the data was categorised; although based on relevant literature, data was also categorised from the perspective of the author and it is assumed that data may be categorised differently by other researchers. Importantly, not all graphic novel records from Wellington City Libraries and Christchurch City Libraries were examined as many did not have any tags applied to them.

8 Methodology

8.1 Social tag themes

This research used a “content analysis” approach (Leedy & Ormrod, 2015, p.275) for the research process. Previous research was examined to obtain themes for the content analysis, as advised in content analysis and research methods literature (Constas, 1992, Vaismoradi, Jones, Turunen, & Snelgrove, 2016; White & Marsh, 2006). It was found that social tags often have recurring themes or seem to fit into a category. Although graphic novels deal with a myriad of topics and issues, overarching tag categories such as “genre” or “location” are used for the content analysis. As suggested in the research methodology literature, further categories were developed as the analysis was undertaken (Babbie, 2004, Cho and Lee, 2014; Leedy & Ormrod, 2015, Vaismoradi, Jones, Hannele, Turunen & Snelgrove, 2016).

9 Data Analysis

For objectivity purposes, the catalogue record for the graphic novel *Head Games* by McDonald, Singles and McClaine that was provided in the search instructions from Wellington City Libraries (C. Todd, personal communication, February 20, 2018) will not be included in the analysis. The tags added to the Wellington City Libraries catalogue are applied by library staff and users, except for the cataloguers. (C. Todd, April 23, 2018, personal communication). It is assumed that tags are added to the Christchurch City Libraries catalogue by users. Search instructions provided to the author were used to find graphic novel records in the Wellington City Library catalogue. These instructions contained three search phrases for locating graphic novels pertaining to different user groups, “Graphic novel”, “Children comic” and “Young adult comicbk” (C. Todd, personal communication, February 20, 2018). Using “Purposive sampling” (White & Marsh, 2006, Table 2., Column 3, Row 5, p. 35), analysis was undertaken from March 14th, 2018 to April 7th, 2018, beginning with the

Wellington City Libraries' catalogue. The search box under the "Home > Catalogue" text was used (Wellington City Libraries, 2018, "Home < Catalogue") as the results page generated from this matched the display provided in screen shot attached to the search instructions from Todd (2018, personal communication). The phrase such as "Graphic novel" was searched for and once the results were displayed the "advanced search" link was accessed and one of the instructed phrases, such as "Children comic" was searched, one at a time, in the "call number" dialog box (Todd, 2018, personal communication). Search results were then displayed like those shown in figure 1. Graphic novel records were accessed by selecting a title. As the overall planned sample size for this study was around 200 records, 36 records were accessed per search instruction.

Advanced Search
> Simple Search

Search with:

Title keyword(s)

Author (last name, first name)

Subject

Publication year

Series

Call Number


Format

Summary, annotation or description

Locations

The results must match:


All fields One or more fields



Fiction

Gentleman Jim / Raymond Briggs.
Briggs, Raymond, 1934-
Montreal : Drawn & Quarterly, 2008.

Call number: **Graphic Novel**
Found: **graphic (2) novel (2)**
Tags: **graphic novel, comics, humour, picture book, children's**

» Save or tag...





Fiction

The seven Lady Godivas / written and illustrated by Dr. Seuss.
Seuss, Dr.
New York : Random House, 1987, c1939.

Subject: **Godiva, Lady, fl. 1040-1080 Fiction. Coventry (England) -- History Fiction. Historical fiction. Icgft**

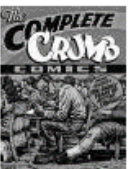
Call number: **Graphic Novel**
Found: **graphic (2) novel (2)**
Tags: **humor, dr. seuss, picture book, children's, children**


» Save or tag...


Non-fiction

The complete Crumb. Volume 1, The early years of bitter struggle / R. Crumb ; edited by Gary Groth with Robert Fiore.
Crumb, Robert, 1943-
Westlake Village, CA : Fantagraphics Books, 1987.

Call number: **Graphic Novel**
Found: **graphic (2) novel (2)**




Biography

Maus : a survivor's tale. II, And here my troubles began / Art Spiegelman.
Spiegelman, Art, 1948-
London : Penguin, 1992, c1991.
A memoir of Vladek Spiegleman, a Jewish survivor of Hitler's Europe, and about his son, a cartoonist who tries to come to terms with his...

Subject: **Spiegelman, Art, 1948- Comic books, strips, etc. Spiegelman, Vladek Comic books, strips, etc. Maus (Comic strip).**




Figure 1: The search results for the advanced search "Graphic novel" in the Wellington City Libraries (n.d.a) catalogue. These titles were displayed after using the "advanced search" function.

Similar instructions were not provided for searching the Christchurch City Libraries' catalogue. Instead, the first search instruction for the Wellington City Libraries was reapplied here, which entailed searching for the phrase "Graphic novel" in an advanced search (C. Todd. Personal Communication, 2018). With the Christchurch City Libraries' catalogue the library home page was accessed, the "Advanced Search" link under the search bar at the top right hand of the page was entered (Christchurch City Libraries, 2018b) and the phrase "Graphic novel" was entered in the first dialog box in the "Use this form to construct your query" section using the filters "Include: ALL" and "Call Number" with all other fields left blank. Records were checked and data was corrected where required around the end of May 2018.

9.1 Content analysis coding

Catalogue records were examined, and the resource title, tags and resource URL were documented, with the tags categorised using the following coding;

- A: Represents words related to writing and publishing awards;
- Ad: Represents the target audience of the title;
- CA: Represents a *creative aspect*, which includes tags such as “humour” or specific aspects such as the tag “anthropomorphism” that was applied in the record for *Cerebus*;
- Ch: Represents a character or characters;
- ChA: Represents *character aspect*;
- Ds: Represents the *differential spelling* of a word other than New Zealand English (not to be confused with the *Ms* categorisation);
- F: Represents *format*.
- FL: Represents *foreign language* terms used as tags;
- Ms: Represents the *misspelling* of a word;
- PC: Represents tags relating to authors, creators or publishing bodies;
- Pl: Represents tags relating to *plot*;
- Rc: Represents tags relating to the author of the item;
- T: Represents tags relating to a *topic*;
- TP: Represents tags related to time periods;
- TR: Represents tags relating to notoriety other than awards;

Other code categories based on previous research include;

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- CT: Represents *compound tags*, or tags where two words are combined into one. This was based on research such as Desrochers, Laplante, Martin, Quan-Hase and Spiteri (2016) Guy and Tonkin (2006) and Spiteri (2007);
- Em: Represents *emotions* or feelings;
- S: Represents tags related to a *setting* or location;
- P: Represents *personal tags* applied by users.

Data was collected, and figures generated using *Microsoft Excel 2016*. An example of the records is shown in figures 2 and 3 below.

« Return to result list < Previous Next >


Ronin / created, written and drawn by Frank Miller.

Fiction


Other Title: Frank Miller's Ronin
Authors: Miller, Frank, 1957-
Published: New York : DC Comics, c1987.
ISBN: 0930289218
9780930289218 (pbk.)
Call number: Graphic Novel
Description: 1 v. (various pagings) : col. ill. ; 26 cm.
Subject: Ronin (Comic strip).
Samurai -- Comic books, strips, etc.
Title: Frank Miller's Ronin
Url for this record:
<http://www.wcl.govt.nz/easyfind/?hrecid=|library/m/wellington-carl|0000567870>

Tags: comics, graphic novel, science fiction, samurai, frank miller, sci-fi, dc comics, japan, dystopia, ronin, sf, american, fantasy, miller, cybernetics, cyberpunk, cyborgs, demons, feudal japan, us, action, adult, adventure, anime, ant sang, art, attic, comic novel, comics collection, contemporary, d.c., dystopian, english, future, futuristic, graphic novel curated collection, graphic novels, landing, new york, new york city, revenge, sequential art, sf/f/h, shane roberts, speculative fiction, superheroes, thriller, usa, vengeance, vertigo

Rating: ★★★★★☆ They liked it



Place a reserve






SHARE    ...


Related Authors & Titles

Summary
Author Notes & Sketches
Reviews

Figure 2: The catalogue record for F. Miller's *Ronin* from Wellington City Libraries (n.d.b). Selecting a tag from the list will link to a page displaying resources associated with it.


Results 1 - 10 of 13,393 for **fantasy (md_tags)**, sorted by: **relevance** ▾


 Fiction (11,201)
  Kids (3,370)
  Non-fiction (1,732)
  Teens (1,620)
  Preschool (560)
 9 more...

 **Voice of the gods / Trudi Canavan.**
 Canavan, Trudi.
 Pymble, N.S.W. : HarperCollins Publishers, 2006.

Subject: Science fiction and **fantasy**. local
 Series: Canavan, Trudi. Age of the five ; bk. 3.
 Call number: Fiction
 Found: **fantasy (1)**
 Tags: **fantasy, magic, gods, religion, australian author**


» Save or tag...




 **Voice of the Gods [electronic resource] / Trudi Canavan.**
 Canavan, Trudi.
 Sydney : HarperCollins Publishers, 2010.
 The final book of this fabulous trilogy from the bestselling author of The Magicians' Guild. As protector of the Siyee, Auraya goes to...

Call number: eBook Overdrive
 Found: **fantasy (1)**
 Tags: **fantasy, magic, gods, religion, australian author**

» Save or tag...



 **Last of the wilds / Trudi Canavan.**
 Canavan, Trudi.
 Sydney : HarperCollins, 2006.

Subject: Science fiction and **fantasy**. local
 Series: Canavan, Trudi. Age of the five ; bk. 2.
 Call number: Fiction
 Found: **fantasy (1)**
 Tags: **fantasy, magic, gods, sff, religion**

» Save or tag...




Figure 3: An example of the links to resources related to the tag "fantasy" as listed in the catalogue record for *Ronin* (Wellington City Libraries, n.d.c).

Once all tags were analysed and collected, the *Advanced find* function in Microsoft Word was used to count all instances of tag types by searching for the above codes, with the "Match case" and "Highlight all" functions used. Where codes used the same letters the difference between the numbers was calculated. As an illustration, subtracting a result of 150 for the Award (A) code from a result of 50 for the Audience (Ad) to obtain the actual number (100) for instances of audience-based tags. In certain instances, the code combined with

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punctuation was searched to find results, such searching for the code “A” between brackets and commas.

10 Results

Most of the records had a large amount of tags, with Spiegleman's *Maus: A Survivor's Tale. II, And here my troubles began* having the most amount of tags out of all records in the sample. Other records had no tags, one or only two tags, despite having high user ratings. The tags for Christchurch City Libraries were often sentence-like phrases, which made categorisation easier. Similar tags were not found with the Wellington City Libraries' records although a larger number of tags were applied to their records in general. Table 1 shows the total frequency for each social tag category (see Appendix A).

As discussed in other research, a lot of the tags were polysemous, but entries were often stand-alone words or phrases that seemed to represent more than one aspect. Categorisation sometimes depended on the specific words used, a tag such as "romance", categorised as relating to genre in the record for *High School Debut: Vol. 3*, influenced the categorisation of the tag "dating" as being plot-related (Christchurch City Libraries, 2018a, "Show more..." section, para. 1). Categorisation was also influenced by the assumed subject matter of the item, based on the title. A tag could be seen to belong to more than one category in one record but only one category in another– the tag "teenagers" in a record for *Our Cancer year* was classified as being related to the target audience in one record but then classified as relating to the audience or characters in other records, such as *Full Metal Panic! Vol 3*.

As shown in figure 4, including where categories overlap, the topic, genre, character, personal, synonymous and format tags were the most frequent categories, reflecting research discussed in the literature review by Adler (2009); Mendes, Quiñonez-Skinner & Skaggs (2009) and Weaver (2007). It is important to note that some tags were categorised as topical if a word was felt as significant but did not seem to fit into another relevant category.

The only tag in the entire sample not to use English characters was the tag “悲鳴”, the Japanese word for “scream” and other related words (Google, 2018a, “Japanese-Detected” section, para. 1). The Wellington City Libraries Graphic novel search had the most amount of tags associated with it, followed closely by the Wellington City Libraries “Young adult comicbk” and “Children comic” and the Christchurch City Libraries “Graphic novels” search. Many terms were repetitively used as tags and were common to both library catalogues. These included terms such as “graphic novel” and foreign language terms that repeated over the Wellington City Libraries’ records with tags such as “sarjakuvat”, Finnish for “comics” (Google, 2018b) “quadrinhos”, Portuguese for “comic books” (Google, 2018c), “humori”, Finnish for “humor” (Google, 2018d) “burgeroolog”, a potential misspelling of “burgeroorlog” (Google, 2018e) the Afrikaans word for “civil war” (Google, 2018f) or “tegeserier”, the Norwegian word for “cartoons” (Google, 2018g). The term “ant sang”, which was categorised as a foreign language term, had no translation.

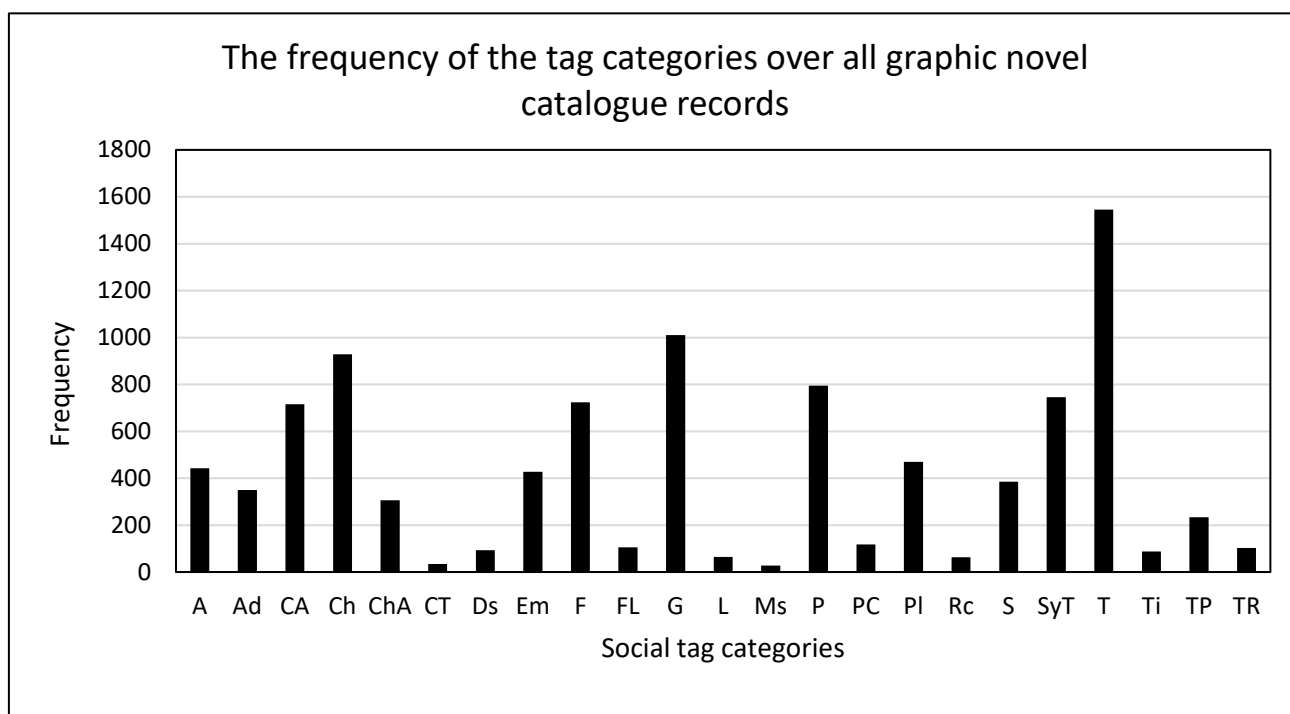


Figure 4: The frequency of each tag category in the sample.

It was interesting to note the use of the term “bande dessinée” in several records as this phrase was first encountered by the author in the peer-reviewed article by Charbonneau

(2005). Only one tag out of the entire sample used expletive terminology, which was applied in two successive catalogue records. A lot of the tags were synonymous, one of the most common examples being “graphic novel” and “comic”. As well as being synonymous and polysemous, the tags were also hypernyms, “subordinate” words in a collection of associated words (Aarts, Chalker, & Weiner, 2014, p. 199). Examples of these included animal names and tags such as “satire” and “pastiche” being subordinate terms or aspects related to the genre of “comedy”.

Interestingly, despite social tagging having no hierarchy or structure, as opposed to LCSH, these terms seem to unintentionally provide a structure to the list of tags, even though, as stated by Todd (February 20, 2018, personal communication) some of the tags applied in the Wellington City Libraries’ catalogue records were created by users but chosen for application by library staff. Other words were heteronyms, words with different pronunciations and meaning but the same spelling (Aarts, Chalker & Weiner) such as with the word “read” in the tag “read 1990s” in the record for *Attack of the deranged mutant killer monster snow goons: a Calvin and Hobbes collection* that could be interpreted as meaning it has been read or someone is wanting to or needs to read it.

Although topical, genre, character, personal, synonymous and format-related tags were the most commonly applied tags overall, slight differences appear in the frequencies between the tag categories at Christchurch City Libraries and Wellington City Libraries’ catalogues when examined separately. The most frequent tags for the Wellington City Libraries’ records, over all the searches, were topical, character, genre, synonymous tags and creative aspect tags whereas personal, topical, genre, emotion-based and plot related tags were the most frequent in the Christchurch City Libraries records. The Christchurch City Libraries records had no language tags whereas there were no award-related or compound tags for the “Comic books” search in the Wellington City Libraries catalogue. Figure 5 shows the frequencies for the tag

types for the three Wellington City Libraries' searches and Figure 6 shows the frequencies for tag types for the Christchurch City Library search.

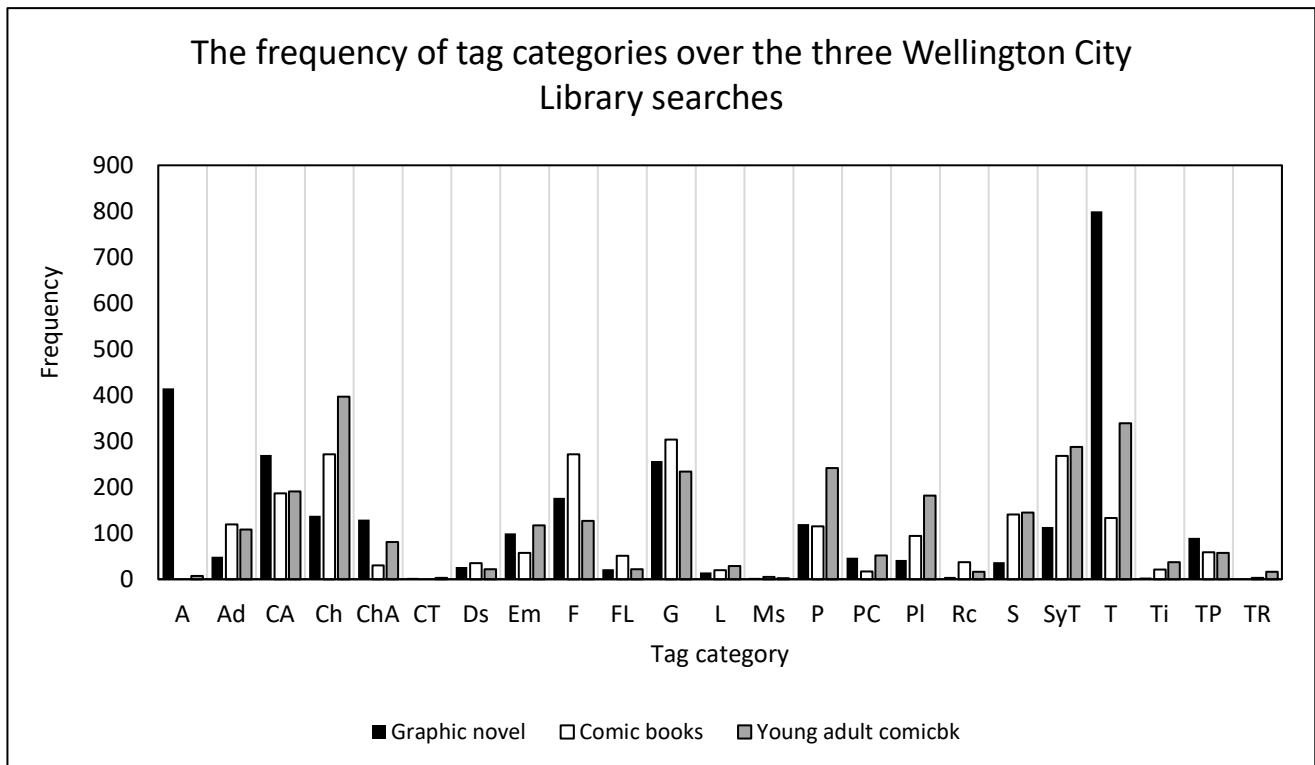


Figure 5: The frequency of social tag types in the Wellington City Libraries catalogue for each search instruction.

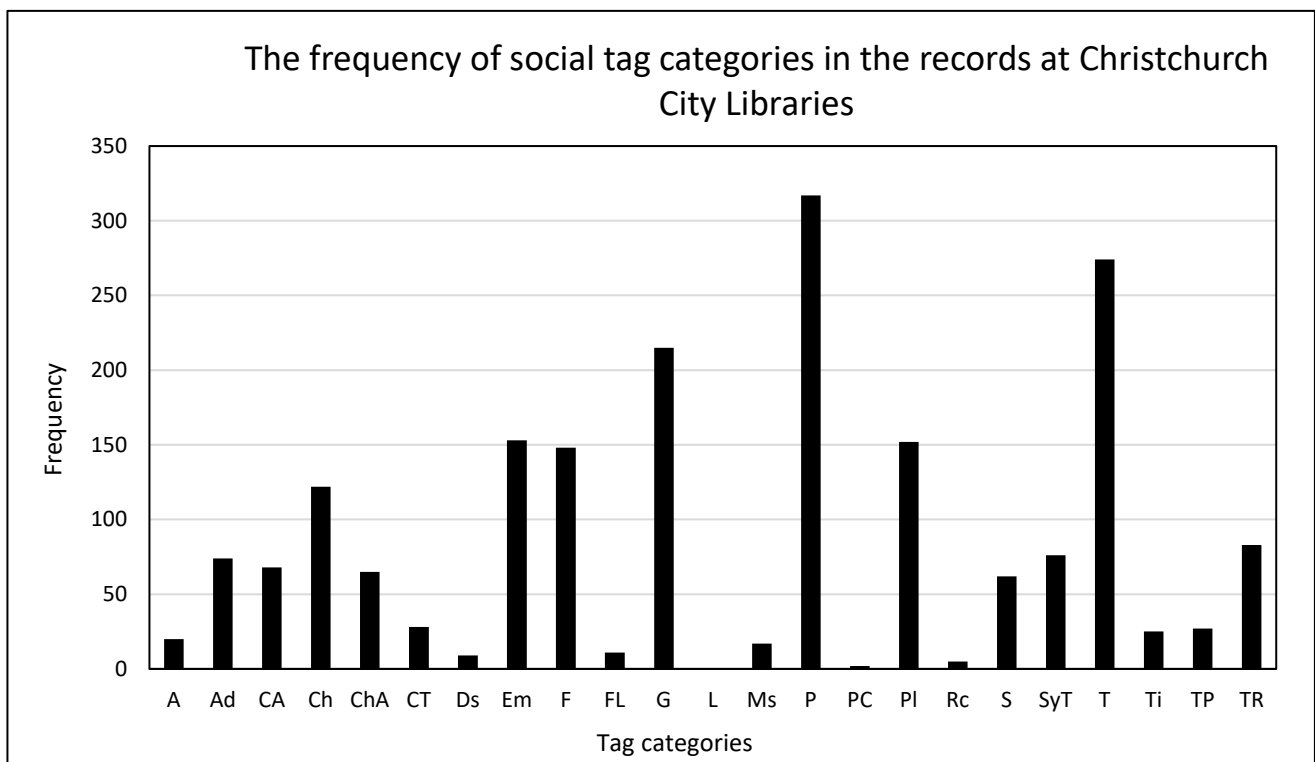


Figure 6: The frequency of social tag types in the Christchurch City Libraries catalogue.

11 Discussion

The research has found that the social tags in the public library records can be placed in multiple categories and that these tags are often synonymous and polysemous, reflecting previous research. Tags were also hypernymous with the most frequent tags being topical, award-related, character, personal and genre with the hypernymous terms providing a type of structure to the social tags despite social tagging having no structure. Despite these issues, the tags seemed to have depth of information.

As previously discussed, the social tags were viewed at face value, rather than following the links to resources related to a specific tag. This would have made categorisation more concrete but was avoided to reduce potential bias. Major limitations are the categorisation of the data and the number of records examined. As tags may be categorised differently by another individual the replicability of the results is reduced. It is possible that if a larger number of records were reviewed then different results may have been obtained. That social tags in the Wellington City Libraries records were created by users but applied by library staff may also reduce the power of the results.

11.1 Implications and future research

The results may play a part in the increasing perceived benefits of graphic novels. The categories of tags users apply to a graphic novel record could reflect an engagement with the text and an understanding of the main ideas, relating to the findings of Klačina-Milićević, Vesin and Ivanović (2018). The structural nature of the hypernymous tags may be an area of future research, as could be research comparing tagged graphic novel records with other resource records, such as general fiction, to examine the differences in how they are tagged and in the tag categories of each resource type.

Although the results presented here are relative to the Christchurch City and Wellington Public Libraries only, it may be practical for other libraries to facilitate social tagging, as the Christchurch City Libraries, Wellington City Libraries and others such as (upon examination) Auckland Council Libraries (2018) have done. Other libraries may not obtain similar results to what was found with the collections analysed here this should not deter them from attempting a similar study.

12 Conclusion

It has been found that the social tags in the Wellington City Libraries and Christchurch City Libraries catalogues provide depth of information but, as reflected in previous research, are affected by issues of polysemy, synonymy and hypernymy. Tags relating to topic, genre, characters, personal aspects and format were the most frequently applied category, with other tags such as foreign language and descriptive terms, also repeated frequently. However, these results are limited by the categorisation and data collection processes and more than one coder may be of benefit. It is hoped that this research will shed some light on the social tagging process implemented in the libraries studied and may, even to a small extent, assist other libraries in examining the same aspects.

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14 Appendix A

Table 1: The frequency of the social tag categories over all searches in the sample

Tag Types	Wellington City Libraries			Christchurch City Libraries	Total	
	Graphic novels	Comic books	Young adult comicbk	Graphic novels		
A	415	0	7	20	442	
Ad	49	119	108	74	350	
CA	270	187	191	68	716	
Ch	138	272	397	122	929	
ChA	130	30	81	65	306	
CT	3	0	3	28	34	
Ds	27	35	22	9	93	
Em	100	57	117	153	427	
F	177	272	127	148	724	
FL	21	51	22	11	105	
G	257	304	234	215	1010	
L	15	20	29	0	64	
Ms	3	5	2	17	27	
P	120	115	242	317	794	
PC	47	17	52	2	118	
Pl	42	94	182	152	470	
Rc	5	37	16	5	63	
S	37	141	145	62	385	
SyT	114	268	288	76	746	
T	800	133	339	274	1546	
Ti	4	21	37	25	87	
TP	90	59	57	27	233	
TR	1	3	16	83	103	
Total	2865	2240	2714	1953	9772	19544

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