Affective Taxonomies of the Reading Experience: Using User-Generated Reviews for Readers' Advisory

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ABSTRACT
This paper examines affect in the reading experience to help both readers’ advisors and readers as they work to suggest books to readers and choose books for their individual context. Using Grounded Theory analysis of 536 user-generated reviews from 831 bibliographic records of a selection of fiction titles (n=22) in Canadian public libraries whose catalogues allow for the inclusion of user content were analyzed for affective content. The content of the reviews was coded into three categories, Emotions, Tones, and Associations and taxonomies were developed. Emotions are represented by 9 basic categories, and 44 unique emotions, Tones by 11 basic categories and 141 unique tones, and Associations by 7 basic categories and 31 unique associations. Affective access points can serve as an important addition to the bibliographic records for works of fiction and it is suggested that the derived taxonomies could be used as facets by which to narrow the results of a search for readers’ advisory efforts in public libraries.

Keywords
Reading experience, readers’ advisory, taxonomies, affect, user-generated content, public libraries, online catalogues.

INTRODUCTION
In the public library context, readers’ advisory (RA), being that library-specific service in which “the entire point … is to reach readers” (Wyatt, 2007, p. 30) and to provide the right book in the hands of the user at the right time, is a central and longstanding core of the profession. While many readers will conduct their own advisory work indirectly, including using features of the library catalogues to help their search, RA is often a face-to-face discussion initiated by a reader, or proactive librarian, based on the premise that “direct interpersonal contact is the best way to give service and encourage future interactions” (Hollands & Trott, 2006, p. 206). Readers’ advisors often employ various tools as part of their advisory work, such as professional texts or databases, ranked reading lists, library catalogues, and professional reviews, but also informal sources such as corporate bookselling portals (e.g., Amazon) or ‘word of mouth’ social interactions. Theory within RA looks at finding methods of communicating about books and titles; Joyce Saricks (2005) offers the appeal factors, which are based on how users perceive the feel of a book, specifically characterization, timeframe or setting, atmosphere, storyline, and pacing, whereas Dali (2014) calls for expansion of RA language to also encompass the reading experience, that is, why readers read.

Research on pleasure reading examines the reading experience (see, for example, Ross 1999), but little of this research has examined the affective aspects of reading in detail (McKechnie, Ross, & Rothbauer, 2007; Ross, 1998; 1999; Peijtersen & Austin, 1984). Affect is defined as “an inner disposition or feeling, rather than an external manifestation or action” (Oxford English Dictionary, 2016). Beard and Thi-Beard (2008) and Dali (2014) suggest that contemporary RA is limited by its emphasis on the book, rather than the practice of reading, and its excessive focus on the book as an object. Dali believes RA interactions should focus more why people read, rather than what they read; further, appeal elements only make sense and come to life if they are validated by readers. McKechnie, Ross, and Rothbauer (2007) suggest that readers' advisory tools, of which the library catalogue is a part, should incorporate the affective dimensions of relational aspects of reading into interface design and navigational strategies.

This study examines the affective aspects of reading on library users as expressed in user-generated reviews found in public library catalogues. Focusing on understanding affect in the reading experience will help both readers’ advisors and readers as they work to suggest books to readers and choose books for their individual context.
Overall, affect is an umbrella term with a subset of feelings within, including emotions, tones, and associations, as defined in WordNet:

- **Emotions** pertain to affect, i.e., “the subject aspect of feeling or emotion” (Princeton University, 2016).

- **Tones** pertain to “the quality of something (an act or a piece of writing) that reveals the attitudes and presuppositions of the author” (Princeton University, 2016). Tones tend to evoke reactions such as laughter, fear, horror, and are thus related to affect in that the tone of a book can evoke a feeling or emotion. So, a book with a frightening tone can cause the reader to experience the emotion of fear.

- **Associations** pertain to “the process of bringing ideas or events together in memory or imagination” (Princeton University, 2016). For example, a reader’s association with motherhood can impact her emotional response to the book about children.

**LITERATURE REVIEW**

**RA**

Historically, RA focused on aspects related to the story or the book (Saricks, 2005). Little to no historical RA literature considers the affective aspects of the “studies on fiction readers have tended to focus on the cognitive aspects of book selection while overlooking affect” (Ooi & Liew, 2011, p. 753).

An advocate of having users’ reading responses form part of RA appeal vocabularies, Wyatt (2007) suggests classifying books by feeling rather than subject. Saartti (1999) distinguishes two elements found in fictional works, the factual and the imaginative. Caplinger (2003) believes that standardizing RA terms to have better defined appeal terminology is a “subjective territory” and “a daunting challenge, but one that is also extremely exciting for its potential to open a new avenue of communication with library patrons” (p. 288). In a similar vein, Beard and Thi-Beard (2008) advocate for focusing on why people read and to revise RA strategies to take this reasoning into account. When discussing appeal, Dali (2014) found “readers do not differentiate between intangible/abstract (e.g., mood, atmosphere, tone) and concrete/objective (e.g., genre, subject) characteristics of books” (pp. 39-40).

Studies indicate that emotional experiences are useful to convey in a readers’ advisory capacity, especially as related to online tools. In their investigation of fiction access points in library catalogues, RA databases, and online bookstores Adkins and Bossaller (2007) found the emotional experience produced by the book was better covered by the reviews included in the online bookstores and NoveList than by the subject headings in library catalogues. Dali (2013) investigated appeal in RA publications and tools, and found that RA sources did not stop at book characteristics, but “alluded to appeal beyond the book, such as inspiration, empowerment, passion” (p. 482). Dali’s suggests that appeal must consider the reader’s situation, mood, and needs (Dali, 2013, p. 483). Stover (2009) offers that “bibliosocial networking sites are getting the vocabulary of appeal out there to readers” (p. 246), and Naik (2012) points to how readers in GoodReads readership communities use appeal terms in an organic manner; this offers opportunity to broaden the definition of RA as informal advisory roles that can be undertaken successfully by other readers.

Trott (2008) has long advocated for libraries to make their catalogues more useful to readers by incorporating data from corporate bookselling sites or allowing readers to tag and comment about books read. In their survey of search tactics for fiction in public libraries, Mikkonen & Vakkari (2012) found that “[c]urrent library systems can be considered somewhat static as they do not adapt to meet the needs of different readers” (p. 222), and that faceted search interfaces are a strategy that could help. Similarly, Sauperl’s (2013) discussion of fiction description indicates that genre characteristics and positive and negatives reviews are essential to bolster the information in subject description provided by librarians.

**Classifying affect**

As this paper looks at the affective aspects of the reading experience, it is necessary to examine the literature around emotion, tone, and associations to better understand this theme, especially related to taxonomy construction.

Descartes was one of the earliest scientists to introduce a categorization of emotion (Parrot, 2010). Scherer (2005) characterizes responses to the question “What is an emotion?” as “thorny” (p. 696). Rosch (1973) introduced conceptually basic categories or prototype categories, which are abstract categories of which representative images can be formed. Fehr and Russell (1984) built from this example as they examined the emotion taxonomy with basic level emotion categories.

From these a variety of approaches has been proposed that divide emotional categories into subsets. While Shaver et al. (1987) offered a prototypical categorization of only five basic emotions, namely those categories that children first learn, these basic emotions have been subdivided as fuzzy sets with subordinate levels of emotion. Others move from the prototype manner of thinking. Ekman (1999) argued for emotional categories as special biological properties, where “emotions evolved for th fundamental life tasks” (p. 46). Appraisal theorists, however, look to cause as a method of distinguishing emotion (Moors, 2013; Moors, Ellsworth, Scherer, & Frijda, 2013). Jarymowicz and Imbir (2015) posit a taxonomy of emotions as related to the diversity of their causes rather than the variety of feelings.

Theoretical models of affect and emotion have been developed to better describe these systems of

Hancock, Landrigan, and Silver (2007) question the presence of emotional tone in text-based computer mediated exchanges and if they support emotional exchange. Their research found participants developed strategies to adapt their emotional expression to the text-based communication environment (Hancock, Landrigan, & Silver, 2007). Oatley (1994) builds a taxonomy from literary criticism and psychological perspectives as he considers the readers’ experience. He discusses the importance of readers’ identifying with a narrative world and experiencing emotion through associations and identification, two overlapping aspects of his taxonomy. Oatley (1994) indicates that, “In art an emotion in the present is mediated by reliving an emotion from the past” (p. 63) and further, that readers can take on characteristics of fictional characters.

This study will contribute to the corpus of literature on affect and the reading experience and on the taxonomies of affect, specifically, relating to emotions, tones, and associations in the context of the reading experience.

RESEARCH QUESTIONS
In their analysis of user-generated content in public library catalogues, Pecoskie, Spiteri, and Tarulli (2014) found that user tags place a greater emphasis on the topic of a work, or what could be called the subject of the work, and that Library of Congress subject headings emphasize the genres of the work, which does not provide specific information about the work’s content. User reviews place a heavy emphasis on more affective aspects of a work, such as the readability of a book and its tone or mood; the study, did not, however, analyze in-depth the nature of these affective access points. The goal of this study is to explore affect further by conducting a comprehensive analysis of the affective content expressed in reader reviews contained in the bibliographic records of a selection of fiction titles in Canadian public libraries whose catalogues allow for the inclusion of user content. Specifically, this study examines the following questions:

- What emotions are discussed as part of the reader’s reading experience?
- What tones did the reading experience elicit for the reader?
- What associations to external factors do readers make as part of their reading experience?

The end goal of this analysis is to create useful taxonomies of emotions, moods, and associations that could be used to assist readers as they narrow the focus of their searches for works of fiction, either through facets supplied by the social discovery system layer on a library catalogue (e.g., narrow the results by a specific types of emotions, such as sadness, joy, and so forth), or through interactions with readers’ advisory staff.

METHODOLOGY
The dataset was obtained from libraries selected using the Canadian Public Libraries Gateway, http://www.collectionscanada.gc.ca/gateway/s22-200-e.html, which provided a listing of all public libraries in Canada of all types and sizes. The entire population of Canadian public libraries (n=43) using BiblioCommons (n=33), SirsiDynix (n=3), and Encore (n=7) systems (the social discovery platforms used most frequently) was included. From the final set of library-located bibliographic records (n=831), the bibliographic records for 22 unique adult fiction titles were examined in the 43 social discovery platforms. The 22 titles were selected from a variety of shortlists and winning lists of major literary prizes. In total, 631 reviews were extracted from the base sample of 831 records from January-March 2013; once duplicate reviews were removed, the final set of reviews was 536.

Grounded Theory was used to provide a more in-depth analysis of the user reviews (Corbin & Strauss, 2014; Hollan, Hutchins, & Kirsh, 2000; Hsieh & Shannon, 2005; Walker & Myrick, 2006). This study uses a deductive approach, whereby the content of the reviews was coded into three pre-determined categories, Emotions, Tones, and Associations, as these categories featured prominently in the findings of the Pecoskie, Spiteri, and Tarulli (2014) study. “The deductive approach is appropriate when the objective of the study is to test existing theory or retest existing data in a new context” (Choo & Lee, 2014).

One of the co-authors and a research assistant independently coded the 536 user reviews, assigning a colour per code as it related to one of the three categories of affect: Red for Emotions; blue for Tones; and green for Associations. The second co-author, who was not involved in the first round of analysis, independently coded the reviews according to the three categories, and subsequently assessed the three sets of categorical analyses of user reviews, examining them for overlap, clarity, exclusivity, and relevance.

Taxonomies for Emotions, Tones, and Associations were created by examining all concepts coded in the relevant colours and sorting the terms into superordinate basic-level categories. A basic level category (e.g., a Basic Emotion) is the highest level in the hierarchy of categories that is preferred by humans in learning and association tasks. Basic categories are associated most closely in cognitive psychology with the work of Eleanor Rosch’s Prototype Theory (Rosch, 1973). So, for example, the Basic emotion of Anger contains subordinate emotions such as annoyance, displeasure, and frustration.
The taxonomies for Emotions and Associations were derived from an analysis of extant taxonomies in the fields of social psychology, cognitive science, and behavioural science (Baddely, 2004; Baldoni, Baroglio, Patti, & Rena, 2012; Cowie & Cornelius, 2003; Fehr & Russell, 1984; Francisco, Gervas & Peinado, 2012; Manier & Hirst, 2008; Mastin, 2010; Parrott, 2010; Plutchik, 1980; Scherer, 2005; Shaver, Schwartz, Kirson, O’Connor, 1987; Squire, 1992, 2004; Storm & Storm, 1987). The taxonomy for Tones created by the authors in the first phase of this study (Pecoskie, Tarulli, & Spiteri, 2014) was used.

Credibility of the analysis was maintained through prolonged engagement with the dataset at all stages, and by all researchers. Further, coding comparisons conducted by one researcher independent of the primary analysis ensured that the integrity of the deductive analysis was based on the principles of Grounded Theory. Finally, in the comparative analysis, memo writing as a method of undertaking the final analysis and discussion between researchers allowed for codes to be revisited at multiple intervals.

**FINDINGS**

**What emotions are discussed as part of the reader’s reading experience?**

Of the 831 bibliographic records examined for the 22 titles, 678 (30.82%) contained 536 unique user reviews. The bulk of the reviews originated from the BiblioCommons libraries, although these numbers were not equal across each BiblioCommons library, which suggests that while user content is shared among institutions, it is not equitably uploaded to each library, or that the host library has a choice from where the content originates. On average, 28.73 unique reviews were assigned to each title. There was a vast range in the number of user-contributed reviews for the titles; Grace Williams says it out loud contained only one unique review, whereas Room contained 210. No reviews were provided in any of the catalogues for A man melting. For the 21 remaining titles, 141 unique emotions were assigned, for a total of 650 occurrences across the 43 library catalogues.

Table 1 shows the taxonomy for emotions represented in the 536 user-generated reviews. The basic emotion Sadness has the highest number of unique emotions (9), followed by Fear (6), Love (5), Engagement, Happiness, and Surprise (4), and finally Disgust (2). Four unique emotions did not fit clearly into any basic emotion, and were thus treated as Uncategorized.

Table 1: Taxonomy of Emotions

<table>
<thead>
<tr>
<th>Basic Emotion</th>
<th>Reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement</td>
<td>168 (26%)</td>
</tr>
<tr>
<td>Happiness</td>
<td>154 (23.69%)</td>
</tr>
<tr>
<td>Sadness</td>
<td>148 (22.76%)</td>
</tr>
<tr>
<td>Fear</td>
<td>55 (8.46%)</td>
</tr>
<tr>
<td>Surprise</td>
<td>38 (5.84%)</td>
</tr>
<tr>
<td>Anger</td>
<td>28 (4.3%)</td>
</tr>
<tr>
<td>Love</td>
<td>21 (3.23%)</td>
</tr>
<tr>
<td>Uncategorized</td>
<td>17 (2.61%)</td>
</tr>
<tr>
<td>Total</td>
<td>1633</td>
</tr>
</tbody>
</table>

Table 2: Number of basic emotions represented by user reviews

**What tones are discussed as part of the reader’s reading experience?**

Table 3 shows the taxonomy of tones represented in the 536 user-generated reviews. The top five basic tones with respect to number of unique sub-tones are Imaginative (21), Frightening (19), Conventional and Realistic (16), and Dramatic (14). The basic tone of Humorous has the smallest number of sub-tones at 4. The large variety of sub-tones in some of these categories reflects the variety of terms employed in the reviews, rather than the importance or validity of the basic tone. In the case of Humorous, for
example, the reviews were very consistent in the use of the small set of four terms (sub-tones) to describe this category while, perhaps not surprisingly, and perhaps fittingly, many different terms were used to describe the tone Imaginative.

### Table 3: Taxonomy of Tones

Table 4 shows the total number of basic tones represented in the 536 user-generated reviews assigned to the titles. None of the 11 basic tones dominates the findings: Realistic appears the most frequently (22.77%), followed by Imaginative (16.76%), Frightening (13.12%), and Dramatic (11.29%). Optimistic (2.91%) and Cerebral (2.18%) occur the least frequently.

<table>
<thead>
<tr>
<th>Basic Tone</th>
<th>Reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realistic</td>
<td>125 (22.77%)</td>
</tr>
<tr>
<td>Imaginative</td>
<td>92 (16.76%)</td>
</tr>
<tr>
<td>Frightening</td>
<td>72 (13.12%)</td>
</tr>
<tr>
<td>Dramatic</td>
<td>62 (11.29%)</td>
</tr>
<tr>
<td>Charming</td>
<td>49 (8.93%)</td>
</tr>
<tr>
<td>Humourous</td>
<td>35 (6.38%)</td>
</tr>
<tr>
<td>Sad</td>
<td>34 (6.19%)</td>
</tr>
<tr>
<td>Conventional</td>
<td>29 (5.28%)</td>
</tr>
<tr>
<td>Complex</td>
<td>23 (4.19%)</td>
</tr>
<tr>
<td>Optimistic</td>
<td>16 (2.91%)</td>
</tr>
<tr>
<td>Cerebral</td>
<td>12 (2.18%)</td>
</tr>
<tr>
<td>Total</td>
<td>549</td>
</tr>
</tbody>
</table>

### Table 4: Number of basic tones represented by user reviews

What associations are discussed as part of the reader’s reading experience?

Table 5 shows the taxonomy of associations represented in the 536 user-generated reviews. The basic associations of Agents and Objects dominate the taxonomy, with 10 and 9 unique associations respectively. As will be shown in Table 6, associations were discussed the least frequently of the three basic categories in the user reviews, and presented fewer variations in language used; Events and Periods tended to refer to relatively objective concepts, such as named periods, historical events, and so forth, that could be expressed more consistently via the same codes or terms. Historical periods and specific events often appeared in the bibliographic record via specific Library of Congress Headings. This level of specificity was not included in the taxonomy, as (a), it would not be consistent with the level used in the other two taxonomies, and (b) the specific headings could be found in the 6XX subject heading field in the bibliographic record.

<table>
<thead>
<tr>
<th>Basic Association</th>
<th>Derived Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agents</td>
<td>Actors, authors, children, corporations, directors, fictitious characters, generations, government, persons, reviewers</td>
</tr>
</tbody>
</table>

### Table 5: Taxonomy of Associations

<table>
<thead>
<tr>
<th>Basic Association</th>
<th>Derived Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actors</td>
<td>Authors, authors, children, corporations, directors, fictitious characters, generations, government, persons, reviewers</td>
</tr>
<tr>
<td>Authors</td>
<td></td>
</tr>
<tr>
<td>Children</td>
<td></td>
</tr>
<tr>
<td>Corporations</td>
<td></td>
</tr>
<tr>
<td>Directors</td>
<td></td>
</tr>
<tr>
<td>Fictional Characters</td>
<td></td>
</tr>
<tr>
<td>Generations</td>
<td></td>
</tr>
<tr>
<td>Governments</td>
<td></td>
</tr>
<tr>
<td>Persons</td>
<td></td>
</tr>
<tr>
<td>Reviewers</td>
<td></td>
</tr>
</tbody>
</table>
help them decide whether this is an item they would enjoy reading. Given the research on reading choices and mood (Ross & Chelton, 2001), these questions are essential: Does the work match or meet their emotional needs? Does the work represent an emotional state that readers want to avoid? Does the work represent an emotional state that the readers want to reach?

Let us look at this more closely through the lens of one title, Room, which generated the largest number of user reviews (210). The Library of Congress (LC) Headings assigned to this title across the 43 library catalogues are:

- Kidnapping-Fiction
- Boys-Fiction
- Psychopaths-Fiction
- Escapes-Fiction
- Mother and Child-Fiction
- Psychological Fiction
- Large print books
- Suspense fiction
- Canadian fiction
- Prisoners-Fiction
- Imagination-Fiction
- Large type books

Table 5: Taxonomy of Associations

Table 6 shows the total number of basic associations represented in the 536 user-generated reviews assigned to the titles. Associations with Objects dominate the list, with 58 occurrences (43.93%), followed by Agents (40.15%). The remaining five categories of association appear infrequently, with Periods showing the least occurrence at 0.76%.

<table>
<thead>
<tr>
<th>Basic Association</th>
<th>Reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objects</td>
<td>58</td>
</tr>
<tr>
<td>Agents</td>
<td>53</td>
</tr>
<tr>
<td>Experiences</td>
<td>29</td>
</tr>
<tr>
<td>Places</td>
<td>6</td>
</tr>
<tr>
<td>Events</td>
<td>3</td>
</tr>
<tr>
<td>Activities</td>
<td>2</td>
</tr>
<tr>
<td>Periods</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>132</strong></td>
</tr>
</tbody>
</table>

Table 6: Number of basic associations represented by user reviews

DISCUSSION

In this section, illustrative examples are drawn from the title Room, since it generated the largest number of unique reviews, as well as the most varied number of affective categories.

Emotions

The presence of 141 unique emotions, which occurred 650 times in the 536 user-generated reviews, serves as a strong indicator of the importance of affect in readers’ interactions with the books they read. The diversity with which users express their emotional states in the reviews points to the impact of user-generated metadata on the richness of the bibliographic record. As discussed previously, the MARC bibliographic records do not capture the emotional impact of the works. The MARC record provides only the bare-bones description of the content of the work; the user reviews provide the added richness and nuances of the work that can help provide other readers with a greater understanding of the work and, perhaps more importantly,
Conclusions

Our analysis of the 536 user-generated reviews revealed that readers expressed a rich variety of affective access points for the 22 fiction titles examined. Specifically, Emotions are represented by 9 basic categories, and 44 unique emotions. Tones by 11 basic categories and 141 unique tones, and Associations by 7 basic categories and 31 unique associations. The 6XX subject access fields in the MARC records are used primarily to describe the content and format of works of fiction, namely, names of people, places, corporate bodies, or meetings, chronological period, topic, and genre. Reading experience, however, cannot be expressed well in the MARC record, which is why affective access points can serve as an important addition to the bibliographic records for works of fiction. The derived taxonomies for Emotions, Tones, and Associations could be used in the catalogue’s discovery layer as facets by which to narrow the results of a search, e.g., narrow the results by books that are humorous and surprising, or omit books that are frightening or sad. The broader categories could be used as suggested placeholders for users who wish to add tags to fiction titles (e.g., what emotions did this book evoke?). RA staff could use these taxonomies to assist readers in selecting items to read, or to generate suggested reading lists that correspond to these taxonomies (e.g., books that are imaginative and cerebral). These taxonomies can help readers define more clearly their reading experience and why they enjoy (or not) reading certain works. The ability to express these experiences can open up possibilities for reading referrals, both from other readers, as well as RA staff, and to help provide the right book in the hands of the user at the right time.

References


