The Textual Patterns of Political Themes: 
Regular Expressions and Concordancing 
for Digital Political Theorists

—DRAFT VERSION—

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This project (full paper version):
http://www.webdubois.org/lectures/williams-apsavr24-full.pdf

Conference presentation version:
http://www.webdubois.org/lectures/williams-apsavr24-conf.pdf

Related project on Du Bois's Taney theme:
http://www.webdubois.org/lectures/williams-spsav23.pdf
I. The Project

[1] My project seeks to demonstrate the value of a multi-disciplinary and digitally-based set of tools and techniques designed to trace political concepts and their themes across collections of texts. The techniques extend beyond simple searches of an idea specified by word or phrase. Indeed, the techniques focus on the varied textual patterns by which authors express their ideas synonymously and metaphorically.

[2] The project showcases my work on W.E.B. Du Bois (1868–1963) and my on-going analysis of his use of Justice Roger Taney's infamous statement in the Dred Scott Supreme Court case delivered in 1857 (Ehrlich 1979; Fehrenberger 1978; Finkelman 2007). Regarding "the class of persons who had been imported as slaves, ....[and] their descendants, whether they had become free or not" (U.S. Supreme Court 1857: ¶34), Taney wrote:

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They had for more than a century before been regarded as beings of an inferior order, and altogether unfit to associate with the white race, either in social or political relations; and so far inferior, that they had no rights which the white man was bound to respect; and that the negro [sic] might justly and lawfully be reduced to slavery for his benefit. [. . . .] [36] [U.S. Supreme Court 1857; emphasis added]
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Du Bois applied the Taney statement to other social relationships: e.g., "the rest of the monarch's subjects had no rights which the monarch was bound to respect". His use of Taney is significant in several ways. Not only does that expression allow Du Bois to normatively criticize oppression against African Americans, but it also provides a template for normative critiques of other forms of social oppression.
Specifically, the project extends my earlier, original scholarly research. I have not located other scholars of Du Bois who have studied his thoughts on Taney in any thematic way, let alone via concordancing a corpus via regular expression search protocols. (There are, however, studies of other aspects of Du Bois's rhetoric: e.g., Akassi 2018; Menzel 2018, M. Rogers 2012).

In this current project I seek to study textual patterns evocative of the Taney statement: e.g., "Has the minority [. . . ] no right to respectful consideration?" [DARK 1920: Ch.VI] Why do I seek after Taney-evocative passages in Du Bois's corpus? They arguably constitute how an author understood the idea and applied it. Also, such evocative passages may help us to understand the significance of the author in a broader intellectual context, especially with other contemporaries.

The central terminology applied in this paper—corpus and its creation, concordancer and concordancing, and regular expression (regex) searching—derives from corpus linguistics and computer programming.

(a) The corpus of Du Bois's writings that I created contains approximately 235 digitized documents, including 19 published books of fiction and non-fiction, two transcribed interviews, and numerous essays of social science research, as well as various political and social commentaries. Numbering about 3,000,000 words, the study corpus is non-representative collection of his total writings: over 2000 published pieces and thousands of unpublished typescripts and manuscripts (Aptheker 1973; visit the websites listed in Section "(VII) B. Repositories of W.E.B. Du Bois's Unpublished Writings" below).

(b) A concordancer is a software tool that permits statistical and close-reading actions to be performed on all of the documents in a corpus. Corpus linguists, translators and language educators employ concordancers regularly in their work. I use AntConc v3.5.9 (released 2020), because newer versions of AntConc 4.x do not allow the proximity-style regexes by which I typically conduct my research (Anthony 2020a, 2020b, 2022). (Figure 1 below shows the concordancer interface).

(c) Regular expressions are search protocols that computer programmers both love and hate, not necessarily in equal measure. Regexes, as they are often called, are a notational system that match text strings (whether input from a password field on a web interface or from text documents digitized into machine-readable form).
The Appendices below provide more details and resources.

[6] The paper's sections cover:
• The next section briefly discusses my definition of digital political theory, distinguishes it from digital humanities, outlines its theoretical justifications grounded in linguistics, and surveys my previous research on Du Bois's Taney theme.
• Then comes a section on the initial steps I applied in my research on Taney-evocative passages in Du Bois's writings.
• The following section offers more complex regexes designed to locate any possible evidence for Taney-evocative textual patterns.
• After the closing section, the Appendixes contain further information relevant to corpora and their creation, concordancing software, and the affordances offered by regexes.

[7] This paper abounds in conventions, both typographic and referential:
(a) Each in-text citation to Du Bois's writings references an abbreviated title and publication date. The "Bibliography" section ((VIII) A.) alphabetically lists the abbreviated titles.
(b) I have found that formatting, such as boldface or double indentations for quotations are sometimes lost when converting to different file encodings. Thus, I indicate some formatting throughout the paper by paired HTML tags: <blockquote> </blockquote> for long quotations, <i> </i> for italics, <p> </p> for paragraph, and <b> </b> for bold face (especially for emphasis in quotations).
(c) Regular expressions (regexes) used in my research are numbered and located on separate lines. For two examples of regexes presented below, consider

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{re-2} (?i)bound to respect
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{re-3} (?i)\brights\W+(?:\w+\W+){0,10}\brespect\w*
```

(d) If regexes are not designated by a number [(b) above], then that regex or its elements is depicted by paired guillemets: e.g., »bound to respect«.
(e) Any search words or their matches are indicated by double quotation marks: e.g., "bound to respect".
(f) Within directly quoted passages text displayed in small-capital letters indicates the match made by a regex. Also, bold-faced text within those quotations indicates the portion of the
passage that relates to the Taney theme, including the regex-matched text. For example, Regex \{re-2\} locates this: "\<b\>no rights which the white man was BOUND TO RESPECT\</b\>." [GBF 1924: p.143; emphasis added]

II. Digital Political Theory: Overview and Application

[8] The paper's subtitle might prompt a question or two. What is digital political theory? As I intend the phrase, digital political theory techniques allow me to pursue the ideas of authors and the recurring textual expressions of those ideas among the digitized, machine-readable texts gathered into a corpus. As a consequence, I can explore numerous expressions, including those that recur across texts and time, examining any, sometimes many, possible similarities and differences.

(II) A. Digital Political Theory and Digital Humanities

[9] Digital Humanities (DH) involves computational techniques which are useful in seeking patterns and themes in e-texts and corpora. In those ways both digital political theory and DH are similar. However, the differences between them are marked and originate in their respective methodologies (Dobson 2019; Ramsay 2011; Rockwell & Sinclair 2016), which this subsection briefly illustrates.

[10] DH techniques like topic modeling, etc., operate under certain protocols designed to locate statistically based themes derived from textual patterns of words. Such protocols can vary among the different DH techniques but characteristically include one or more of the following (Gavin et al. 2019):
(a) They can create matrices of words occurring in their respective documents or relative to the other words in their respective sentences that nonetheless remove the words from their larger context, including multi-sentence paragraphs. Such procedures, while capable of generating statistical metrics, make it difficult to understand the intricacies of the authors's use of words, especially if the writers articulate ideas and themes spanning sentences and even paragraphs. (Demonstrative pronouns serve admirably to link related or constituent components of themes across sentence and paragraph boundaries).
(b) They may utilize minimum frequencies (called tokens) of the word (called type) as a criteria, and thereby will miss the potential significance of *hapax legomena* as well as miss potentially
miss the onomasiological richness of (near) synonyms and metaphors that help to constitute the meaning of a concept.
(c) They might, and many DH techniques do, remove stop words, such as "a" or "the", as well as "no" or "not" from the documents to be processed, thus rendering (if the latter set are removed) any onomasiological dimensions to the words impossible to discern. In addition, each word type is distinct and may itself be a concept or topic per se. However, types composing a phrase may not be identifiable following DH techniques that remove stop words or omit types below a certain threshold.

[11] In my self-understanding as a digital political theorist of W.E.B. Du Bois I am seeking better comprehension of Du Bois's ideas—especially how he himself makes meaning in and about the world, in his own voice via the application, construction, modification of concepts. Those ideas may be well recognized concepts that course thematically through his works, like the color line or the Talented Tenth. The concepts may be lesser studied, but arguably still thematic ones, like Du Bois's idea of the unknowable (R.W. Williams 2012; 2014; 2018; 2021). What I am calling Du Bois's Taney theme fits here. Accordingly, I choose techniques and software that enhance the capability of reading large numbers of texts that allow their words to be present and complexly interwoven in the output of the research techniques.

[12] Resources, including the works of others that I found valuable:
(a) For more details on my discussion of DH vis-à-vis digital political theory, visit R.W. Williams (2023).
(b) For interpretive approaches to political theory, read Beckstein & Weber 2022; Bevir & Rhodes 2015; Blau 2017; Walsh & Fatovic 2017; Yanow 2006.
(c) For useful works on digital humanities, read Jin 2017; Jockers 2013; Piotrowski & Fafinski 2020; Rockwell & Sinclair 2016; Underwood 2019.
(d) For digital humanities techniques utilized in political theory and philosophy, consult Basu & McQueen 2022 [topic modelling]; de Bolla 2013; London 2016; McQueen 2015.

(II) B. My Previous Research on the Taney Theme
[13] As a practical definition, a theme is a recurring pattern of ideas expressed via words. Authors can designate intentionally a theme in their works, or scholars can provide textual
evidence that such a theme exists, even if the author does not so state it. A theme for me as a political theorist is not necessarily based on a minimum or threshold number of tokens of one word. For scholars of Du Bois, the concept of double consciousness per se is found in only two early documents and never repeated again, belying the large number of scholarship studying it. In addition, a theme can consist of a set of ideas arranged to constitute an argument.

[14] As regards my previous research on the Taney theme:
(a) I can search for some specific reference to Dred Scott or Taney by name.
(b) I can search for some specific explicit expression of Taney's statement with regard to "bound to respect".
(c) I can search for some sort of modification of the exact Taney statement, but retain some key identifier of the statement itself, such as "rights" and "bound to respect". These would locate what I call Du Bois's Taney variant expressions.

[15] Ad (a) above [Specific reference to Dred Scott or Taney by name]

Figure 1: The Interface of AntConc 3.5.9 (2020) [Regex {re-1}: (?i) taney|\bdred]

Note: The above figure is found in my spsav23 presentation (R.W. Williams 2023: Figure 1 [¶30]). Also note that Du Bois also quoted sources that themselves directly quoted Taney. The regex that generated these matches:

{re-1} (?i)taney|\bdred
[16] Ad (b) above [Explicit expression of "bound to respect"]

Figure 2: All 18 Matches for Regex \{re-2\}: (?i)bound to respect

Note: The above figure is found in my spsav23 presentation (R.W. Williams 2023: Figure 2 [¶39]). Also note that the results must be disambiguated to discern the quotations of Taney and variants which change the subordinated/dominating social groups. The regex I created that found the matches displayed above:

\{re-2\}   (?i)bound to respect
The following table displays several examples of Taney-variant passages:

**Table 1: Taney: "they had no rights which the white man was bound to respect"**

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**SYNTAGMATIC AXIS**

<table>
<thead>
<tr>
<th>Subordinated Group(s)</th>
<th>Dominating Group(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Taney :: enslaved persons] they had no rights which the white man was bound to respect</td>
<td></td>
</tr>
<tr>
<td>DISF</td>
<td>Negroes &amp; paupers have few rights which society leaders are bound to respect</td>
</tr>
<tr>
<td>GBF</td>
<td>failure to recognize that the mass of men had any rights which the better class were bound to respect</td>
</tr>
<tr>
<td>CDCP</td>
<td>colored &amp; black folk inhabiting colonies owned by white nations, who will have no rights that the white people of the world are bound to respect</td>
</tr>
<tr>
<td>DARK</td>
<td>It is the husbands, brothers, &amp; sons... [who do NOT]... acknowledge that women have rights which men are bound to respect</td>
</tr>
</tbody>
</table>

Note: The above table is found in my spsav23 presentation (R.W. Williams 2023: Table 3 [¶63]).

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[18] As I wrote in R.W. Williams 2023 (¶ 64-65):

> Referring to Table 1, we see how Du Bois, with the Taney variants, substitutes words signifying different social groups (along the paradigmatic axis), while keeping "rights"
and "bound to respect" in place as part of the syntagmatic chain. By changing the dominating group—Whites in America—to others (monarchs, men, colonizers) and changing the subordinated group—enslaved African Americans and their descendants—to monarchial subjects, women, the colonized), Du Bois maintained a normative critique grounded on human equality and rights, as well as the denial of such equality and rights in ideology and practice. [The syntagmatic and paradigmatic aspects of the interpretation are based on Gates (1998: 54-55).]

Such a shifting of dominating and subordinated groups...
(a) expanded the historical and geographical scope of the original Taney statement beyond its U.S. ambit, circumstances, and tremendous political and social consequences;
(b) implied that various forms of social relationships could be criticized as unjust by means of an analogous argument, which held that, in ways similar to slavery being heinous and dehumanizing (but not necessarily in the same manner or to the same extent), some social groups were denied rights based on human equality, and thereby subordinated;
(c) implicated, or at least might suggest to readers, that there was a basis for cross-national and inter-group solidarity among and between oppressed groups and communities; and thereby
(d) might motivate readers and audiences to challenge oppression (via its rhetorical appeals to logos and pathos).
</blockquote>

[19] Some of those matches in Table 1 were found via more complex regexes. To match other possible variants we can create a proximity regex: we will seek to match two words near each other. This will help us locate the various ways that Du Bois wrote "word#1" and then "word#2" after an intervening span of words, coded as a word subpattern »\W+ (?:\w+\W+){0,10}«, with the span specified as from zero to ten words with the range quantifier »{0,10}«.

{re-3} (?i)\brights\W+(?:\w+\W+){0,10}?\brespect\w*
The metacharacter »\w « matches a single alphanumeric character, while the »\W « matches a non-alphanumeric character, such as punctuation marks, space, bracket, parens, etc. The quantifiers, and there are others, are ubiquitous in regexes: the »* « (asterisk, or Kleene star) matches zero or more alphanumeric characters in »\w* «; the »+ « matches one or more non-alphanumeric characters in »\W+ «.

[20] These are the texts containing Taney statements and Taney variant expressions (R.W. Williams 2023: ¶42 [spsav23]). The writings presented in Table 1—Du Bois's works containing »bound to respect« as part of the Taney statement or its variants—are listed here chronologically by publication year.

• 1909: JBN: <i>John Brown</i> [ch.IX=p.264; ch.XI=p.373]
• 1910: EOTN: "Evolution of the Negro" [¶ 5]
• 1911: SEBS: "Social Evolution of the Negro South" [p.3]
• ca.1911-12: DISF: "Disfranchise" [Section 6]
• 1917: OCWF: "Of the Culture of White Folk" [¶ 29]
• 1920: DARK: <i>Darkwater</i> [ch.II; ch.VI]
• 1924: GBF: <i>The Gift of Black Folk</i> [ch.4=p.136, p.143]
• 1935: BREC: <i>Black Reconstruction</i> [ch.1=p.10; ch.6=p.167; ch.14=p.593]
• 1945: CDCP: <i>Color and Democracy: Colonies and Peace</i> [ch.1=p.9]
• 1956: n56-01-02: "Let's Restore Democracy to America" [p.947]
• 1957: BFT-1: Black Flame Trilogy, v.1: <i>The Ordeal of Mansart</i> [p.110]
• 1961: USNF: "United States and the Negro" [p.11]

For 60 years Du Bois used Taney in his critiques of various types of oppression. Because the Taney statement and its variants (involving modified subordinate and dominating groups) recurs over time, I consider Taney to be a theme within Du Bois's writings, albeit not a major and well recognized one like the "color line" or the "Talented Tenth".

(II) C. Theoretical Justifications Informing My Regex-Mediated Research

[21] I base my research on two theoretical justifications derived from linguistics: the onomasiological dimension and the related distributional hypothesis. Onomasiologically, we as communicators in a language can express an idea, a set of ideas, or as I will argue a theme, in
more than one way. That is to say, a concept is conveyed as a word or phrase, but the concept's expression is not limited to that one word or phrase (Grondelaers et al. 2007; Gunnell 2011; Halliday 2004; Hampsher-Monk et al. 1998; Richter 1995; Skinner 1989). By extension the theme's expression is not, or may not be, limited to set phrases. As an example, my on-going research studying Du Bois's concept of the unknowable as a theme across his writings uncovered only eight instances of that specific word (R.W. Williams 2021). However, that number increased when I sought related—that is, onomasiologically related—expressions, such as "The world will never know the exact number of slaves transported to America." (TDOP 1904: ¶ 27)

[22] This framing of textual expression is related to the distributional hypothesis of linguistics. The distributional hypothesis holds that words that positioned closer to each other in the utterance are related to each other than other in terms of the construction of the meaning of those words and the utterance itself (Firth 1968; Harris 1964; also see Gavin et al. 2019; Manca 2012; Sahlgren 2008). Accordingly, within the document we can look around the word qua concept to derive words to examine in order to determine if they are part of the definition or application of the concept. Such an examination can also discern any possible synonyms (Alfano 2018; Danis & Meunier 2012), as well as hyponyms (a word exemplifying, or subordinate to, another category of things, but which is not necessarily synonymous with that category: e.g., cats and dogs are hyponyms of the categories of animal or pets, but cats and dog are not necessarily synonymous with each other or with the categories per se). We can then search for such words in our quest for a concept and its textual expressions (Bussmann 1996).

[23] Such linguistic theory helps us to understand Taney-evocative passages. An author may rephrase an idea articulated in different ways over time and texts, and yet the different phrasing may still refer to, or at least call to mind, the initial theme. This is the core of my search for Taney-evocative passages, yet a question remains. How far can phrasing and ideas be changed and still be considered as evoking a theme?

[24] My definition of an evocative passage means that the passage calls to mind a concept via its similarities with the original statement that characterizes the concept or theme itself. How many similarities? That is, how many of the characteristics of the original statement are sufficient to call to mind the Taney statement. Answers to such a question will be debatable. Nonetheless, the
criteria that I suggest can enhance the intertextuality of any passage located (Allen 2000; Kreiswirth 1996).

[25] I propose four criteria by which to discern a Taney-evocative passage. The criteria are based on the Taney statement itself. A Taney-evocative passage will contain—and/or the surrounding sentences may implicate—all four of the following criteria:
(a) Some mention of the specific word "rights", or in a broader sense, some mention of examples of civil and political rights (e.g., equality, liberty).
(b) Some dimension of "respect" per se or its synonyms, such as recognition or consideration.
(c) An imperative and/or normative aspect similar to "bound to".
(d) A racial or other form of social hierarchy that involves and domination and subordination.
To interpret any passage as Taney-evocative likely will require reading the surrounding text so as to understand how all four criteria are included and/or implied by the match. The matches will require disambiguation of the matches. What regexes did I craft for this phase of my Du Bois-Taney theme project?

III. Taney-Evocative Passages in Du Bois's Writings: Initial Steps
[26] What we emphasize in our inquiry is how we craft the regexes. Given the criteria for identifying a Taney-evocative passage, we can do one or more of the following.
(a) We can search for "rights" and examples as well as "respect" or synonyms (similar to the regexes listed above with regard to my initial research of the Taney variants).
(b) We can search for social hierarchies with regard to "rights" and/or examples of "rights".
(c) We could require normative or imperative aspect oriented to "respect" or a synonym.
(d) We can do all of the above, one after the other and examine the results
These are my search strategies.

[27] This section specific regexes that can be employed to synonyms. Section IV which appears next will list regexes that utilize those synonyms.

[28] More specifically, let me suggest one possible work flow:
(a) We choose one or more search terms.
(b) We craft regexes accordingly, then test them.
(c) We run the regexes via a concordancer.
(d) We disambiguate the match results, if any matches are located.

(III) A. The First Case

[29] Consider this passage from *Color and Democracy: Colonies and Peace* (CDCP 1945).

> "Where the white resident contingent is relatively large, as in South Africa and Kenya, the caste conditions are aggravated and the whites become the colony while the natives are ignored and neglected except as low-paid labor largely without RIGHTS THAT THE COLONISTS NEED RESPECT." [CDCP 1945: ch.02=p.22; emphasis added]

I located this passage when studying Taney statements in my previous work, in particular running the regex with regard to "rights" and "respect" with the distance between the words using word subpatterns. I also could locate the passage with a slightly different unidirectional regex.

{re-4} (?i)\brights?(?:.){0,60}?brespect

This is similar to {re-3} except that it uses a dot metacharacter (which matches alphanumeric characters) to create a range between the two words that spans from zero to 60 words, rather than a word subpattern (R.W. Williams 2023: ¶50 [spsav23]). (Regex metacharacters are not literal letters, but rather control the operation of the regex). The passage above is very close to a Taney variant, perhaps more so than a Taney-evocative passage. Nevertheless, from it we can draw forth a synonym for "bound to": namely, "need".

[30] Let us consider a different passage that was also located via "rights" vis-à-vis "respect" regex involving the dot metacharacter ({re-4}). It is arguably less like a Taney variant and more like a Taney-evocative passage, within the paragraph's context.

> Granted that government should be based on the consent of the governed, does the consent of a majority at any particular time adequately express the consent of all?

> Has the minority, even though a small and unpopular and unfashionable
minority, no RIGHT TO RESPECTful consideration? [DARK 1920: Ch.VI; emphasis added]

The quotation from *Darkwater* I will argue is Taney-evocative, especially because of the co-text in which Du Bois wrote it. The phrase "right to respectful consideration" refers to a minority, which, when considered in relation to the majority specified in the previous sentence, implicated that a group was subordinated to a dominating majority within the U.S.A.

(III) B. Locating More Synonyms

[31] From the *Darkwater* passage, we locate several synonyms, such as "respectful" and "consideration". Also, we can derive synonyms from Du Bois and/or from a dictionary or thesaurus, then craft regex accordingly.

[32] Let us examine Du Bois's writings. We can also locate potential synonyms by examining the co-text within the matches displayed via the concordancer's KWIC-view window. One regex to do so:

```regex
{re-5} (?i)\b(?:\w+\W+){5}\brights\W+(?:\w+\W+){5}
```

Note: Yes, this could be done simply with »\brights«. Because the word subpatterns placed before and after "rights" are highlighted in AntConc, thereby we can discern them more easily, I suggest, within the 5-word window around the node word "rights".

[33] The previous regex generated 1016 matches including these synonyms and synonymous phrases of "rights":

- civil rights
- political rights
- property rights
- human rights
- rights of / as citizens
- manhood rights
- Negro rights
- equal rights
- equal rights of the freedmen
- rights as men
- freedmen demanded rights
- Bill of Rights
- sovereign rights
- economic rights
- mineral and oil rights
- rights and privileges of citizens
- legal citizenship rights
- rights of nations
- rights on the seas
- States' rights
Let us now search for passages in Du Bois's writings that contain some of those synonyms.

IV. Taney-Evocative Passages: Proximity Regexes with Synonyms

[34] Proximity regex locates search terms near each other within a variable range of words or characters. Such regexes are valuable in my quest for how Du Bois defined, modified, and applied a concept in its onomasiological dimensions, and also to perhaps locate nearby concepts qua words that are not necessarily part of the idea or theme that I am seeking, but which nevertheless indicate some semblance of importance to Du Bois because of their proximity (as per the distributional hypothesis of linguistics). In this section I will put forward several ways to code proximity regexes. Note that many of the different regexes discussed below can locate the same passages from Du Bois's corpus.

(IV) A. Bi-Directional Proximity Regexes

(IV) A.1. Synonyms of "Rights" vis-à-vis Synonyms of "Respect"

[35] For the first example of a proximity regex let us seek synonyms and hyponyms of "rights", such as

- free, freed, freedom
- liberty, liberties, liberation, liberating
- equal, equality, egalitarian

in relation to synonyms of "respect"

- recognize, recognition
- consider, consideration
- respectful, respectfully

These synonyms derive predominantly from the reading the co-text of Du Bois's writings.

[36] Based on those synonyms we can create a regex like this:

```
{re-6} (?i)\b(free|libera?t|equal|egalit)\w*{:}{0,50}?(?:recog
ni|consider|respect)\w*|(recogni|consider|respect)\w*{:}{0,50}){0,50}?\b(?:free|libera?t|equal|egalit)\w*
```
The regex appears complex, at least in part because of its length and metacharacters not previously encountered. This particular regex actually has two sets of subpatterns separated by a vertical bar (» | «) which is the metacharacter for alternation—that is, "or". The first subpattern set first seeks to find synonyms of "rights" (free, freedom, liberty, liberate, equal, equality, etc.) within 50 characters or fewer of synonyms for "to respect" (recognize, recognition, consider, respectfully, etc.). The various possible word spellings can be matched by the »\w* « metacharacter with the Kleene star (i.e., asterisk) that matches zero or more letters (e.g., free, freely, freed, freedoms, etc.). The second major subpattern occurs after the alternation metacharacter; it reverses the order in which the two sets of search terms must match.

[37] The previous regex return 188 matches, all of which must be disambiguated. Here are two matches with their surrounding textual content. The first match is found in the second novel of Du Bois's Black Flame Trilogy.

<blockquote>
"Also, through court cases and the assistance of well trained lawyers, white and black, the Supreme Court began to <b>RECOGNIZE THE NEGRO AS A FREE citizen.</b>"

[BFT2 (1959): p.68; emphasis added]
</blockquote>
This is Taney-evocative, not the least of which because of Du Bois's intertextual references to 1950s U.S. Supreme Court cases.

[38] In the second example matched by the previous regex Du Bois was discussing the U.S.A. in the eventual post-WW2 era at a roundtable event:

<blockquote>
<p>Nothing can be done about this situation until we face fairly the question of color discrimination in the South; <b>until the social, political, and economic EQUALITY OF CIVILIZED MEN IS RECOGNIZED, despite race, color, and poverty.</b> </p> [WPRP 1944: p.45; emphasis added]
</blockquote>
This passage to me is less obviously Taney-evocative, but still hints at it. Du Bois explicitly did indicate racist oppression and did stipulate the respect of rights in the form of equality. He did not seem to indicate a normative imperative tantamount to "bound to".
(IV) A.2. Synonyms of "Rights" vis-à-vis Synonyms of "Bound To"

[39] Seeking synonyms for the normative and imperative of "bound to" we can seek these words:

bind binding
ought should must need
have to has to had to

I derived these words from Du Bois's writings and from contemplating possible synonyms.

[40] We can craft a proximity regex with those words in relation to the synonyms of "rights" mentioned previously. This is one possible regex:

```regex
{re-7} (?i)b(?:free|libera?t|equal|egalit)\w*(:?)(?:0,50)\b(?:b
(?:i|ou)nd|ought|need|ha[dsv]e?\s+to|should|must)\w*|\b(?
?b(?:i|ou)nd|ought|need|ha[dsv]e?\s+to|should|must)\w*(?:
?:0,50)\b(?:free|libera?t|equal|egalit)\w*
```

The brief description of a previous regex hopefully will be useful in understanding this particular regex.

[41] One of the matches comes from Black Reconstruction (1935): ch.02=p20.

<blockquote>
<p>This demand became epitomized in the crusade of William Lloyd Garrison, himself a poor printer, but a man of education, thought and indomitable courage. This movement was not primarily a labor movement or a matter of profit and wage. It simply said that under any condition of life, the reduction of a human being to real estate was a crime against humanity of such enormity that its existence must be immediately ended. After emancipation there would come questions of labor, wage and political power. <b>But now, first, MUST BE DEMANDED THAT ORDINARY HUMAN FREEDOM and recognition of essential manhood which slavery blasphemously denied.</b> This philosophy of freedom was a logical continuation of the freedom philosophy of the eighteenth century which insisted that Freedom was not an End but an indispensable means to the beginning of human progress and that democracy could function only after</p>
</blockquote>
the dropping of feudal privileges, monopoly and chains. </p> [BREC 1935: Ch.02=p.20; emphasis added]
</blockquote>

To me this passage hints strongly at a Taney-like theme. It is very Taney-evocative because it emphasized slavery and indicated that during the 19th Century William Lloyd Garrison as part of the abolitionist movement demanded (normative imperative) that freedom (exemplifying rights), which slavery negated (group subordination of humans) be recognized (be respected).

(IV) A.3. Synonyms of "Bound To" vis-à-vis Synonyms of "Respect"

[42] The regex I craft here seeks to match synonyms of the normative imperative "bound to respect". Importantly, I am not looking for one necessary phrase, but rather the synonyms that may be separated by words or characters. One possible regex is:

```regex
{re-8} (?i)\b(b(?:i|ou)nd|ought|need|h[a|dsv]e?\s+to|should|must)\w*{0,50}(?:recogni|consider|respect)\w*|(recogni|consider|respect)\w*{0,50}(b(?:i|ou)nd|ought|need|h[a|dsv]e?\s+to|should|must)\w*
```

[43] This regex located two interesting passages within one paragraph of "Our Visit to China" (OVCH 1959).

<blockquote>
<p>Nevertheless <b>our people for three hundred years have HAD TO STRUGGLE FOR RECOGNITION as American citizens, because most of our folk were in slavery or worked as low-paid serfs for exploiting whites.</b> Many whites joined us in our struggle, and thus our people have gained important victories in our fight for equality in the last two centuries. This battle still goes on and <b>MUST BE CONTINUED UNTIL NEGROES ARE RECOGNIZED</b> as equal to other American citizens. </p> [OVCH 1959: p.1; emphasis added]
</blockquote>

In the quotation above, the word "rights" is not explicitly written, but "equal" is mentioned as an example of rights that must be recognized (i.e., respected). Slavery points to dominating group subordinating others. Here the imperative "must" pointed to the battle being waged.
We can craft other types of proximity regexes with different search parameters.

(IV) B. Three Sets of Search Patterns within a Specified Distance of Each Other

It might be useful to examine three groups of synonyms within a delimited scope of text. A complex, relatively compact [considering what it is seeking to match (the search terms are explicitly written only once)] regex put forth by Goyvaerts & Levithan (2012):

```
{re-9} (?i)(?:(?>\bright\w*\b()|\b(?:b(?:i|ou)nd|ought|need|had\sv\e?\s+to|should|must)\w*\b()|\b(?:respect|observ|recogni|consider)\w*\b()|(?>\1|\2|\3)\w+)\W*?){0,20}\1\2\3
```

Goyvaerts & Levithan acknowledge the complexity of this particular regex. As I have coded the regex it seeks to match three sets of words in any order within a span ranging from zero to twenty words. It utilizes empty capture groups—the paired parentheses »(«—to delay failure of the regex until the attempt to match all three sets of words has failed within a 20-word range beginning after the first match (if a first match is possible within the document).

The previous regex located a Taney evocative passage in Darkwater.

<blockquote>
<p>So, too, Negro enfranchisement meant reconstruction, with its theft and bribery and incompetency as well as its public schools and enlightened, social legislation. It would mean today that <b>black men in the South would HAVE TO BE TREATED WITH CONSIDERATION, HAVE THEIR WISHES RESPECTED AND THEIR MANHOOD RIGHTS recognized.</b> Every white Southerner, who wants peons beneath him, who believes in hereditary menials and a privileged aristocracy, or who hates certain races because of their characteristics, would resent this. </p>
</blockquote>

The paragraph's context situates, historically and geographically, Blacks in the post-Civil War era, which includes racist White Southerners. Enfranchisement brought with it the imperative that African American rights would need to be respected. Without my observations of Du Bois's uses of the Taney statement I might hot have interpreted this passage as Taney evocative.
If we wish to locate three words (synonyms of "rights", "respect", and a normative imperative) within a distance of zero to twenty words from one another, we can create this regex:

\(\text{\{re-10\}} (\text{\(?i\) (? (?:equal|egalit|free|libera?t)\w* (?:b(?:i|ou)nd|ought|need|ha[ds]?v)e\(?s+to|should|must)\w* (?:respect|observ|recogni|consider)\w* (?:\>|\<1|\<2|\<3)\w+) \b\W*?})\{0,20\}\{1\}\{2\}\{3\}\b\W*?\)\]

Here is one match from the latter regex:

<blockquote>
<p>In 1861 the legal status of the American Negro was something like thus: The Chief Justice of the Supreme Court, in an <i>obiter dictum</i>, had just said that, historically, the Negro had "no rights which a white man was bound to respect." [. . . .] All agreed that the Constitution recognized slavery as a legal institution and that the government was <b>BOUND TO PROTECT IT. ABOLITIONISTS WERE CONSIDERED AS CONTEMPTIBLE FOR CONSORTING WITH IMPOSSIBLE RADICALS AND RECOGNIZING NEGROES AS EQUALS.</b> [. . . .] </p> [USNF 1961: 11]
</blockquote>

Note that the regex locates the passage from "bound to protect it" across a sentence boundary to encompass the text until "equals" which just happens to end a sentence. The regex does not find the Taney statement at the start of the paragraph because it does not include "rights" as a search term. Within the paragraph's context, even disregarding the Taney statement itself, the match evokes Taney insofar as it mentioned abolitionists, African Americans as an oppressed group and equality as a right. The "bound to protect it" does call to my mind Taney's claim that Whites and by extension governments upholding White supremacism were obligated to protect slavery. Others may, of course, disagree with my interpretation of this passage as Taney-evocative.

(IV) C. Delimiting the Scope of a Regex Search within Sentence Boundaries

We can craft a different type of regex with the same search terms by confining the scope of the regex to match within sentence boundaries. This might be useful for reducing the number of matches to disambiguate insofar as the meaningful pattern does not occur across sentence boundaries. For example:
Note the assumption underpinning this regex: sentences are delimited by three different types of punctuation marks: dots/periods, exclamation marks, and question marks. However, in the Du Bois corpus abbreviated words like "Dr.", "U.S.A.", and "N.A.A.C.P." also exist and this may lead to false negatives—a failure to match a sentence that comports with the text pattern sought.

[50] Consider this match, which is a full sentence, found via the previous regex:

"TEACHING HAD TO RECOGNIZE THE ESSENTIAL HUMAN EQUALITY OF THE TAUGHT."
[CMAU 1944: p.107]

On the face of it and as delimited by sentence boundaries, this does not seem to be Taney-evocative. However, the sentence is from "The Cultural Missions of Atlanta University" (1942). Interpreted as part of the paragraph in which Du Bois wrote it, the characteristic Taney-evocativeness comes forth.

The question of the ultimate social treatment of Negroes even when educated was avoided by the white teachers in Southern schools so far as possible. Northern opinion came to be on the whole in favor of higher education for Negroes but it was not in favor of social equality, just as it had not originally been in favor even of the abolition of slavery. On [p.107] the other hand, the logic of the case was irrefutable. TEACHING HAD TO RECOGNIZE THE ESSENTIAL HUMAN EQUALITY OF THE TAUGHT. An institution of acculturation like a university could not successfully set up caste lines on its campus, and in the long run the logical end of educating the Negro was to make him the social equal of other folk. Successful education for caste is only possible with a curriculum directed specifically to that end. A broad program of higher training based on the national democratic ideals, such as Atlanta had adopted, absolutely forbade treatment based on race inferiority. But this was not a matter of immediate concern and the leaders in Atlanta University and other schools were quite willing to leave its full answer to the future. [CMAU 1944: 106-107]
Racial oppression under conditions of slavery and Jim Crow implicated the subordinate and dominating groups, and thereby created the historical context in which the equality of the taught must be respected—all of which supports my interpretation of this passage as Taney-evocative. Interpreting passages as Taney-evocative consumes time, but the experience is somewhat more pleasant if the scholar enjoys the writing style and subject matter of the author being studied.

V. In Closing

[51] Du Bois often and to great rhetorical effect used normative critiques in his lectures and publications. The Taney theme is one among many that he wielded as a public intellectual against White supremacism in its various forms. Not all of the normative themes are as obvious as the "color line" or the "Talented Tenth". Normative critiques as a theme can be traced more easily if we avail ourselves of a corpus and regular expressions search techniques. Yet as relatively easy as regexes are to apply via concordancers, corpus creation is the most difficult task in this type of research. But once the corpus is created, then regexes, whose crafting is informed by linguistic theories, will help us to find the possible expressions of a theme.

[52] The Taney statement and its variants are the easiest to argue as thematic in Du Bois, especially because he invoked them across sixty years of writings. Taney variants focused on various social relationships and different historical milieux. The Taney-evocative passages tended to focus on the U.S. history and its racial injustices (with a few exceptions, as I could interpret them: a40-10-26 1940: 336; BFTN 1939: 119; WCFA 1925: 437). Such evocative passages are important thematically, because they allow us glimpses into how he used similar dimensions of the Taney statement. In this paper I did not count the number of Taney-evocative passages because I cannot say unequivocally that any given one was considered by Du Bois to be Taney-inspired or to be an intertextual referent. However, I gave examples of what the regexing did locate in the corpus and presented them as possible pieces of evidence to justify my claims.

[53] The Taney statement and Taney variants are easier to locate than Taney-evocative passages, not the least of which because the former are evidenced by one sentence. A Taney-evocative passage, as I have discussed herein, requires more than one sentence, perhaps even a surrounding paragraph, in order to provide the elements that justify a claim for it to be part of the Taney
theme in Du Bois's thinking. Computational techniques that more narrowly focus on removing each word from its wider textual environment, or else focus on statistically relating only a few co-occurring words together most likely will not find and will not recognize (so to speak) Du Bois's Taney-evocative passages. This, then, is the value I attach to digital political theory via regexing by concordancer. We can access large numbers of documents, all the while being able to explore and study the textual habitat of a concept and, by extension, a theme.

[54] In general, regexing via concordancer probably will not match every instance of a desired search pattern because of the myriad ways and synonyms by which authors express their ideas. Nonetheless, even if the results are not fully comprehensive, my techniques provide one systematic way to pursue a possible theme within the texts of the corpus and also to document its presence. And with Du Bois there are more themes to uncover with my techniques.

[55] We cannot ask Du Bois to elaborate on any possible Taney-inspired ideas, but we can read his writings in ways attuned to how he himself expressed those ideas in related and various ways. Digital political theory provides us one means to do so and allows us to potentially locate unexplored areas in the writings of a scholar-activist whose ideas have been discussed, criticized, and promoted for over a century.
VI. APPENDICES

(VI) A. The Corpus and Its Creation

[Note: The following subsection is directly quoted from my spsav23 presentation (R.W. Williams 2023: ¶28)].

[56] A corpus of an author's or authors' texts entails the arduous process of converting words in all of the documents to a form that is machine readable. Such a process has all of the positive and negative qualities that obtain to things in the world that can be reduced to a form represented by bits and bytes (Dobson 2019; McCarty 2005). A corpus is not a neutral archive of documents because it incarnates all of the decisions made by scholars during the digitalization and compilation phases (Davies. 2015; Reppen 2010; Tognini-Bonelli 2010). Such mediating decisions include:

(a) How do we render characters in the corpus' file format? [For ASCII files, how do we render non-Latinate alphabets and writing systems, as well as extended Latinate alphabets?]

(b) How do we address typos, misspellings, and spellings that did not become conventional [e.g., spelling "though" as "tho", "expressed" as "exprest" (Simplified Spelling Board 1906)]? I often designate them by means of "[sic]" or other editorial notation. Also, I typically and editorially add conventional spellings: for example, in the Du Bois corpus I might find "coöperate" [sic: cooperate]. This increases the possibility of locating those words via regular expressions.

(c) How do we address photographs, line drawings, tabular data, and so forth? Once we omit them, then they disappear as such from the corpus. As an editorial practice, I typically retain the caption or description, or add them via editorial notation.

(d) There are more concerns, of course (read R.W. Williams 2022).

(VI) B. Concordancers

[Note: The following subsection is directly quoted from my spsav23 presentation (R.W. Williams 2023: ¶¶29–31)].

[57] A concordancer is a piece of software designed to explore a corpus as an assemblage all at one time. Corpus linguists, language translators, and language instructors utilize concordancers. From the perspective of academic scholarship, concordancers allow us . . .

(a) to search for a word, phrase, or anything in between, and then view any matches within its context, or surrounding passage, within KWIC-view (Keyword in Context) window;

(b) to run regexes or more conventional style search protocols.
In addition, concordancers typically include statistical tools for studying a corpus quantitatively (e.g., Bradley 2004; Tribble 2010).

[58] Well regarded concordancers are available for free or pay, both for Windows and Apple computers (Berberich, Kleiber et al. 2023; Weisser 2022). For my research I run AntConc, a popular and widely accepted free concordancer that the linguist Laurence Anthony created and continues to maintain. I am using the earlier AntConc version 3.5.9 (Anthony 2020a), because at the time of this presentation, the latest release, version 4.x, no longer can apply the regexes needed for my research (Anthony 2022). Figure 1 [above] displays the interface of the AntConc 3.5.9 concordancer for Windows computers (displaying the matches of a regex for "Dred" or Taney").

[59] In Figure 1, the KWIC-view window displays the matches for regex \{re-1\} which was listed above:

\{re-1\} (?i) taney | \bdred

This regex, via the modifier flag »(?i)«, matches the lower case strings of "taney" or "dred"; the »\b« is a word boundary that avoids matching "hundred". The KWIC-view window is a valuable way to quickly grasp how authors have used the word or expression among all of the texts in the corpus. The text that surround the search term (or node word) in this window is the co-text. A concordancer can be likened to a Find feature in a word processor, but instead of proceeding one match at time through a document, the concordancer arranges all the matches in rows within the KWIC-view window. From that window I can also disambiguate the matches in order to exclude homonyms and words not applicable to my research. Sometimes, disambiguation requires more details than the co-text can provide; reading the document becomes necessary. If I need to read the entire document, many concordancers like AntConc allow us to click on the search term, and another window, the File-view window, will open at the spot in the document that contains that word or expression.
(VI) C. Regular expressions, or Regexes

(VI) C. 1. Description and Resources

[Note: The following three paragraphs are either directly quoted from my spsav23 presentation, or based on it (R.W. Williams 2023: ¶¶ 32–32)].

[60] Computer programmers regularly create regexes because of their powerful and versatile pattern-matching capabilities. Regexes are put to many tasks, including validating customer input in program interfaces or within the coding process itself in the form of search and replace functions. Corpus linguists also code regexes for their work (Sinclair 1991, 2003; Stubbs 2015 Tognini-Bonelli 2010).

[61] Different computer programming languages implement regexes in different ways. These are called the various flavors of the regex engines that do the searching of the text. The concordancers I have worked with are often based on PCRE implementations (Perl Compatible Regular Expressions). In the paper I will describe the regexes executed as part of this project.

[62] For more detailed explanations, please consult print sources that have proven their worth to me, including Goyvaerts & Levithan (2012) and Friedl (2006). Two excellent web-based tutorials and guides are <https://rexegg.com> and <https://regular-expressions.info>. The PCRE documentation makes for valuable reading (Hazel n.d.). Other online resources that are quite useful. For regular expressions tutorials and guides:

• https://ryanstutorials.net [scroll to "Regular Expressions" link/button]
• https://riptutorial.com/regex
• http://regextutorials.com
• https://blog.robertelder.org/regular-expressions

For online testing of one's regexes:

• https://regex101.com
• https://regexr.com
• https://blog.robertelder.org/regular-expression-visualizer

[63] I regularly test my regexes via RegexBuddy, a relatively low-cost piece of software for Windows platforms, that allows testing of regexes according to different regex engines.

• https://www/RegexBuddy.com
Disclaimer: My endorsement of RegexBuddy is unsolicited and is not compensated by RegexBuddy or Jan Goyvaerts, the creator of the software and co-author of *The Regular Expression Cookbook*.

[64] In my opinion, concordancer support to run the type of regexes that I have created in this paper seems to have decreased over time. The most recent versions of excellent and free concordancers, such as AntConc 4.x and #LancsBox X, have modified their programs in such ways that my regexes will not run. The developers of those programs have created wonderful tools for corpus linguistic research, which alas I do not conduct. Consult online sites for lists of concordancers (Berberich, Kleiber *et al.* 2023; Weisser 2022). Unfortunately those lists do not typically indicate whether the concordancers will execute regexes. It is also possible to find a few text editors that support regexes. Online searches will generate a few results. Text editors, however, do not typically access large numbers of files, such as concordancers do.

( VI) C. 2. **Regex Affordances and Caveats**

[65] The following subsubsections outline both the affordances—i.e., capabilities available to perform tasks and actions—and the caveats of regexes with an emphasis on digital political theorizing:

- Affordance of (paradoxical)? precision
- Affordance of search plurality
- Affordance of scope flexibility
- Affordance of (sub)?pattern variability

Notes:

(a) The affordances are not mutually exclusive; any given regex may exemplify more than one affordance.

(b) Within two of the subheading labels you will find that some of the letters are enclosed in parentheses and followed by a question mark. Those are written in regex notation. The question mark indicates that the textual pattern, or word, in the parentheses is optional and may or may not be found in the document being searched.

(c) Unfortunately, I do not have the space in this presentation to describe and explain the functioning of regexes. The resources listed above will be helpful.
(d) Although the learning curve for regexes can be steep, hopefully the examples covered herein will prove valuable. Indeed, any particular regex can be adapted to a scholar's own research by substituting the relevant search terms in place of mine.

(e) I created the regexes used in this paper, but I used various sources for details and inspiration, and for guidance in regex coding: Goyvaert and Levithan's *Regular Expressions Cookbook*, Goyvaerts' web site <regular-expressions.info>, the anonymously maintained web site <rexegg.com>, and numerous responses to <stackoverflow.com> questions.

(VI) C.2.a. Affordance of (Paradoxical)? Precision

[66] Regexes are literal and can precisely locate patterns in the texts of a corpus (assuming a standardized corpus). Regexes match the patterns in the corpus, which is what we want as researchers, but regexes also can match that same pattern which is a word or phrase we do not want or intend to match—this is the paradoxical dimensions of regular expressions.

[67] For example, if we wished to locate "respect" as in "bound to respect" (without regard to upper or lower case letters; hence the »(?i)« modifier/flag), then this would find it:

{sre-1}  (?i)respect

Yet this regex would also match "respective", "irrespective", as well as the "respect" in many phrases possibly irrelevant phrases, such as "in every respect", "in one respect", "in other respects", and "with respect to", etc. But using a word boundary, such as »(\b)«, and also negative lookbehinds, e.g., »(?<!in)«, and optional suffixes, such as »(ful)?«, will exclude what we wish and potentially match more of what we want to find. The regex we can code:

{sre-2}  (?i)(?!in)(?!all)(?!many|this|some|that)(?!other|every)\srespects?(ful)?(ly)?\b

Note that disambiguation may/will still be needed. Also note that the PCRE version used in AntConc v3.5.9 does not allow variable length negative lookbehinds; hence, this would not be permitted: »(?<!in|all|many|this|some|that|other|every)«. But if the negative lookbehinds are grouped by their respective number of characters into separate lookbehinds, such as this »(?<!in) (?<!all) (?<!many|this|some|that) (?<!other|every)«, then the regex matches "respect" and/or several variants only if they are not preceded by a word listed in the negative lookbehinds (and space character »\s«). Note that not only is "respect" so
matched, but also "respects", "respectful", and "respectfully". Moreover, the question marks placed in »respects?(ful)?(ly)?« would make the preceding letter and/or parenthetical grouping potentially matchable. Accordingly, misspellings like "respectful" and "respectfully" would be matched if they existed in the documents.

[68] Caveats:
(a) Regexes can fail to locate patterns that we wanted to match because of, for example, variant spellings; texts not standardized; and/or unexpected punctuation or spacing.
- Example: Du Bois wrote "double-consciousness" vs. scholars write "double consciousness" [no dash].
(b) Expressions of concepts might be written in reverse order. Hypothetical examples derived from Du Bois's Taney theme:
- "Group Zed has no rights that Group Eks is bound to respect."
- "Group Eks is not bound to respect the rights of group Zed."
[Actually, this reverse ordering was not present among Du Bois's writings in the corpus, but I needed to check anyway].

(VI) C.2.b. Affordance of Search Plurality
[69] There is often more than one way to code a regex using its different features. This can possibly decrease coding time and possibly increase what we might match in the text. We can utilize regex features, such as the alternation of subpatterns, positive and negative lookarounds (both lookahead and lookbehind), conditionals, and negative character classes. From those regex features we can craft search functions for the proximity regexes used in this paper, including word tokens (or word subpatterns) and dot metacharacters.

[70] Word tokens (or word subpatterns) separating the 2 search terms: »\W+(?:\w+\W+){0,10}?\brespect\w*
[71] Dot metacharacter separating the 2 search terms inside a non-capturing group: »(?:.)«:

{sre-4}  (?i)\brights?([^\s]+)?\brespect

The dot metacharacter enclosed within a non-capturing group, as I have experienced it, is faster to write than using word subpatterns.

[72] Bi-directional proximity regex, involving an alternation of two sub patterns:

{sre-5}  (?i)\brights([^\s]+)0,40respect|respect([^\s]+)0,40\rights

[73] Proximity regex that uses a capture group (the parentheses enclosing the subpattern of »\brights« and »respect«) and a negative lookahead that references it »(?!1)«, along with a dot metacharacter and its range quantifier from zero to 40 alphanumeric characters:

{sre-6}  (?i)\brights|respect([^\s]+)0,40(?!1)(?!\rights)(?::rights|respect)

It is easier for me to write this than the previous regex (which is specified as a bi-directional proximity regex that alternates the two subpatterns).

[74] An example of a regex conditional with a dot metacharacter range quantifier; the conditional is an if-then decision structure:

{sre-7}  (?i)(?:((\brights)|\brespect\b)(?1)(?:.){0,20}?(\brespect\b|\brights))

[75] Another conditional with the range quantifier placed outside the conditional:

{sre-8}  (?i)(?:((\brights)|\brespect\b)(?:.){0,20}?(?1)\brespect\b|\brights)

[76] Yet another conditional, but here with word subpattern that spans a possible distance between the search terms from zero to ten words:

{sre-9}  (?i)(?:((\brights)|\brespect\b)\W+(?:\w+\W+)0,10)?(?1)\brespect\b|\brights)
Caveats:
(a) Word tokens differ from a dot metacharacter subpattern due to how the distance between words is measured. The former matches whole words, while the latter matches alphanumerical characters.
(b) The different regexes must be tested on known subject/text strings because the search results may vary, even slightly.
(c) Note that AntConc v3.5.9 requires this »(? (2) « instead of »(? (1) «. The latter syntax, however, is standard PCRW (Hazel n.d.).

(VI) C.2.c. Affordance of Scope Flexibility
We can code regexes that expand or contract the scope of what they are to match. In that way, we can better exclude unnecessary or irrelevant matches. We also can expand across sentences in case the author continues the ideas across multiple sentences. There are several ways to avail oneself of the scope-flexible affordance of regexes, including coding (or not) for sentence boundaries, changing the distance between search terms, or even creating Exclusive-Or (XOR) regexes, which will locate either word1 or word2 but not both within a particular span, such as within a sentence. We can utilize several regex features, including lookarounds and conditionals, as well as reluctant and greedy quantifiers.

Regex to locate "right" and then "respect" within a span of zero to 40 characters distance and within sentence boundaries:
{sre-10} (?i)\bright[^.!?]{0,40}?\brespect
This regex would find variants of "right" and "respect" because no word boundary is used. Only the search terms and intervening text are highlighted in the concordancer's KWIC-view window, not the full sentences. The negative character class »[^.!?]« screens for sentence boundaries.

Regex to locate "right" and then "respect" within sentence boundaries, regardless of the distance between the search terms:
{sre-11} (?i)\bright[^.!?]*\brespect
This regex would find variants of "right" and "respect" because no word boundary is used. Only the matched search string (terms and intervening text) is displayed in the KWIC-view window of the concordancer, not the complete sentence.

[81] Regex to locate "right" and "respect" in any order within a span of zero to 50 characters distance and within sentence boundaries:

{sre-12} (?i)\b(rights|respect)\b[^.!?]{0,50}?(?!1)\b(?!right)\b

This regex would not find variants of "right" and "respect" because word boundaries »\b « are used. The concordancer's KWIC-view window will display the results of the matches, not the full sentences.

[82] Regex to locate "right" and "respect" in any order regardless of the distance between the search terms and within sentence boundaries:

{sre-13} (?i)\b(rights|respect)\b[^.!?]*(?1)\b(?!right)\b

This regex would not find variants of "rights" and "respect" because word boundaries »\b « are used. The concordancer will not display the full sentence, only the matched search terms and any intervening text.

[83] Regex to locate "right" and "respect" in any order regardless of the distance between the search terms and within sentence boundaries:

{sre-14} (?i)(?<=[!.?])([^?!]*(?1)\b(rights|respect)\b[^?!]*(?1)\b(rights|respect)\b[^?!]*[^!])

This regex would not find variants of "right" and "respect" because word boundaries »\b « are used. Note that this regex will highlight the complete sentence in the concordancer's KWIC-view window.

[84] Caveat: Regexes delimiting the scope of the search by sentence punctuation may encounter problems in the documents of the corpus insofar as words are abbreviated by dots/periods or by sentence punctuation being used in unexpected spots within a sentence. The Du Bois corpus
contains a few instances where an exclamation mark indicates an interjection, not the end of a sentence. For example, he wrote: "I was haunted by a New England vision of neat little desks and chairs, but, alas! the reality was rough plank benches without backs, and at times without legs." [SBF 1903: Ch.IV] In addition, direct quotations can involve exclamation and question marks within larger sentences mentioning the speaker. I encountered this quite often in Du Bois's fictional pieces. For example,

"Hello!" she called in low tones. [DARK 1920: Ch.X: "The Comet"]

"What is the world like?" asked Zora. [QSF 1911: Ch.21]

I discovered the three quoted passages within Du Bois's documents via several regexes. The regexes below will match, respectively, an exclamation or a question mark followed by zero or more spaces or punctuation (even a quotation mark positioned at the end of direct quotations), and then a lower-case letter. Note the absence of a case-insensitive flag at the start of the regexes; it is assumed that a new sentence starts with a word's initial capital letter.

{sre-15}  \!\W*[a-z]

{sre-16}  \?\W*[a-z]

To avoid quotation marks, and to illustrate the affordances of search plurality and (sub)?pattern variability, we could craft a different regex like this

{sre-17}  ![?](?!")\s[a-z]

which will match either an exclamation or question mark (via a character class), that is not followed by a double quotation mark (using a negative lookahead), but that is followed by a space, and then is next followed by a lower-case letter.

[85]  This XOR regex finds one specified search term ("respect") within a sentence that does not contain a different specified term ("rights"). It uses negative lookaheads to exclude "rights".

{sre-18}  (?i)(?<=[.?!])(?:(!rights)[.?!])\*respect(?:(!rights)[.?!])\*([.?!])

The regex will highlight the complete sentence in the concordancer's KWIC-view window.
This particular XOR regex finds one search term ("respect") within a sentence that does not contain a different specified term ("rights"). It uses a negative lookahead to exclude "rights" and a positive lookahead to match "respect".

\{sre-19\}  \((?i)(?!<=[.!?])(?![^.!?]*\brights)(?=.*[^.!?]*\brespect\b)[^.?][*.!?.]*\)

The regex will highlight the complete sentence in the concordancer's KWIC-view window.

Here is an XOR regex that will match a sentence containing "respect" without "rights' or else will match "rights" without "respect" within a sentence. It uses lookarounds (positive and negative lookaheads) and alternation between subpatterns.

\{sre-20\}  \((?i)(?!<=[.!?])(?!:(?![^.!?]*\brights)(?=.*[^.!?]*\brespect\b)\n  \|(?![^.?]*\brespect\b)(?=.*[^.!?]*\brights))[^.!?][*.!?.]*\)

The regex will highlight the complete sentence in the concordancer's KWIC-view window.

A caveat with regard to XOR regexes: Although it might be potentially valuable to XOR two search terms, it also might result in numerous matches, especially if the two terms are common within the corpus.

\(VI\) C.2.d. **Affordance of (Sub)?pattern Variability**

Regxes, because of their pattern-matching capabilities, can be created to seek the commonalities among the search terms sought. The patterns can be built on a common stem of a word. For example, to locate words based on "scien" we could code

\{sre-21\}  \((?i)scien\w+\)

We have already seen the metacharacters with quantifiers, such as »\w*« and »\w+« previously in the paper. This regex would match "science", "scientific", "scientifically", scientist" scientists", "unscientific", "conscience", etc. It also would match text such as "sciency" or "scienenda" if they existed in the documents, whether as bona fide words, neologisms, misspellings, or OCR errors. Prepending or appending a word boundary metacharacter »\b« would exclude any prefixes or suffixes, respectively.
Regex patterns can be crafted on substitutions of letters within a common word structure. For example, to find "woman", "man", "women", or "men" we can craft a single regex like this:

```
(?i)\b(?:wo)?m[ae]n\b
```

Here, from the perspective of lexical structure, "man" is different from "woman" by the initial "wo", which can be matched by applying the second question mark coded in the subpattern of a non-capturing group `(?:wo)` in order to designate the option to find "wo" or not. If "wo" is not present, then can "man" be matched? Or if "wo" is present, then is "man" also found immediately after the "wo" so as to specify "woman"? The character class `[ae]` matches at that position in the regex pattern either an "a" or "e"; no other letter can be matched there.

Caveat: This affordance might tempt one to code highly obfuscated regexes, such as

```
\b(?:s?|(t)?)he(?(1)y)\b
```

or

```
(?i)[^a-vx-z](i)(l)\2\1a[sm]{2}
```

It advisable, however, to apply the power of regexes carefully, especially when what I am seeking to match could be accomplished more straightforwardly as

```
\b(she|he|they)\b
```

or

```
Williams
```

```
•• •• •• •• •• •• •• •• ••
```
VII. Bibliography

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