Chapter 7
Applied Analytical "Distant Reading" using NVivo 11 Plus™

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ABSTRACT

NVivo 11 Plus, a qualitative data analysis software tool, enables some types of "distant reading" albeit within the text data processing limits of the desktop machine. Some "distant reading" applications include the following: (1) word frequency counts (visualized as word clouds, tree maps, cluster analyses graphs, dendrograms, and ring graphs/circle graphs), (2) text searches (as word trees), (3) theme and sub-theme extractions (as bar charts), (4) matrix queries (as various types of data visualizations), (5) sentiment analyses (as bar charts, hierarchical treemaps, hierarchical sunburst diagrams, and text sets), (6) autocoding by existing pattern, and (7) geolocational mapping. While "distant reading" is still evolving, these unsupervised and semi-supervised machine reading approaches broaden the capabilities of researchers and may serve as a bridge to even more complex distant reading methods.

INTRODUCTION

I had come to see language as an almost supernatural force, existing between people, bringing our brains, shielded in centimeter-thick skulls, into communion. A word meant something only between people, and life's meaning, its virtue, had something to do with the depth of the relationships we form. It was the relational aspect of humans—i.e., 'human relationality'—that undergirded meaning. -- Paul Kalanithi, When Breath Becomes Air (2016)

Conventionally, reading is thought of as a uniquely human skill, which requires years to develop fluency. And writing is considered something set apart, something that people uniquely do for others—to entertain, to persuade, and to express care. Historically, writing has been used to capture human knowledge and to share it with peers and with those who come after in the future. As such, writing is used to understand the cultures and advancements of society. In people, in terms of learning and skills development, reading is a precursor to writing, and the skills in each co-develop and promote the advance of the other.

Reading is often an integrated part of earliest childhood for many in developed societies and evolves through adulthood and old age. There is a variety of reading matter over a lifetime, numerous genres and styles of writing, and reading content modes (print, multimodal electronic). Reading content may be experienced in different versioned and multisensory ways: text, audiobook, video, and live performance. People may read linearly or in a skipping around method; many will revisit texts for re-reading and re-exploration. Experientially, reading is an intimate experience between the text (as a representation of the author) and the reader, who draws on lived experiences and imagination to make meaning from the language-based symbols. Reading is integrated with the reader's lived life, and a person's memory of a work is often integrated with other sensory experiences: the physical feel of a print book with the irregular pulp or the weight of an e-book reader and the luminescent screen, the motion and sounds of a train car, the taste of an iced tea at a local coffee shop. There may be memories of conversations—in person and online—with other members of a book club. There may be a sense of emotional betrayal when a book character acts against expectations or when an author changes styles and explores different topical territory. People have very cherished and personal memories related to "close reading" or "natural reading" (and sometimes "active reading"). As an experience, reading requires mental concentration and uninterrupted space and time. Socially, for many, reading is a capability and a practice for those in higher social strata, and they indicate something of humanity ("what makes people human") and the advancement of society. How a person reads a work depends on not only his or her training and sophisticated de-coding capabilities but also his or her maturity, personality, and point-of-view. Because reading requires an investment of personal effort, a person generally has to select-in to reading a work from beginning to end and with a sufficient level of concentration to extract value; a published work may change the reader and his or her worldview and attitudes. Depending on training, lived experiences, and cognition, people can read in multiple languages.

Academic reading (a type of reading for learning), with its inherent complexity, is seen as requiring the slowest reading speeds for meaning acquisition, from 200 – 300 words per minute (wpm). "Full reading" or "active reading" (and analytical reading) require full human attention for comprehension; these approaches may include in-text annotations, cross-referencing, questioning, exploring, reflecting, and engaging deeply with the informational contents. There are several types of speed reading. Faster reading—such as "skimming" (reading a text at a high level to extract key concepts and capture a general sense of the information, but not to capture specific details) and "scanning" (glancing through a text for particular information, in a "search")—may be achieved at 800 – 1000 wpm but also with differing levels of accuracy. For example, readers may skim a chapter to capture the gist or the main idea. People may scan a phone book page to find a particular business or individual name. Fast reading tends to be cursory, superficial, and incomplete, as compared with a deeper and more thorough perusal of texts. People read for different reasons as well, and these differing reasons and expectations affect the experience. Reading for pleasure is different than reading analytically. Each person's reading diet is likely unique to the individual and based on his or her educational background, cultural influences, personal preferences, and textual availability. In human reading, the experience is informed not only by the text but also the lived experiences around and outside the text. Experientially, longer textual works are generally experienced as a sequence of reading moments, with culminating memories and impressions. The origins and genres of texts also affect the experiences of reading. While reading itself is often a solitary endeavor, there are many aspects of it which are social, including the literary taste:

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