



DUALITY OF *SCIENCE*

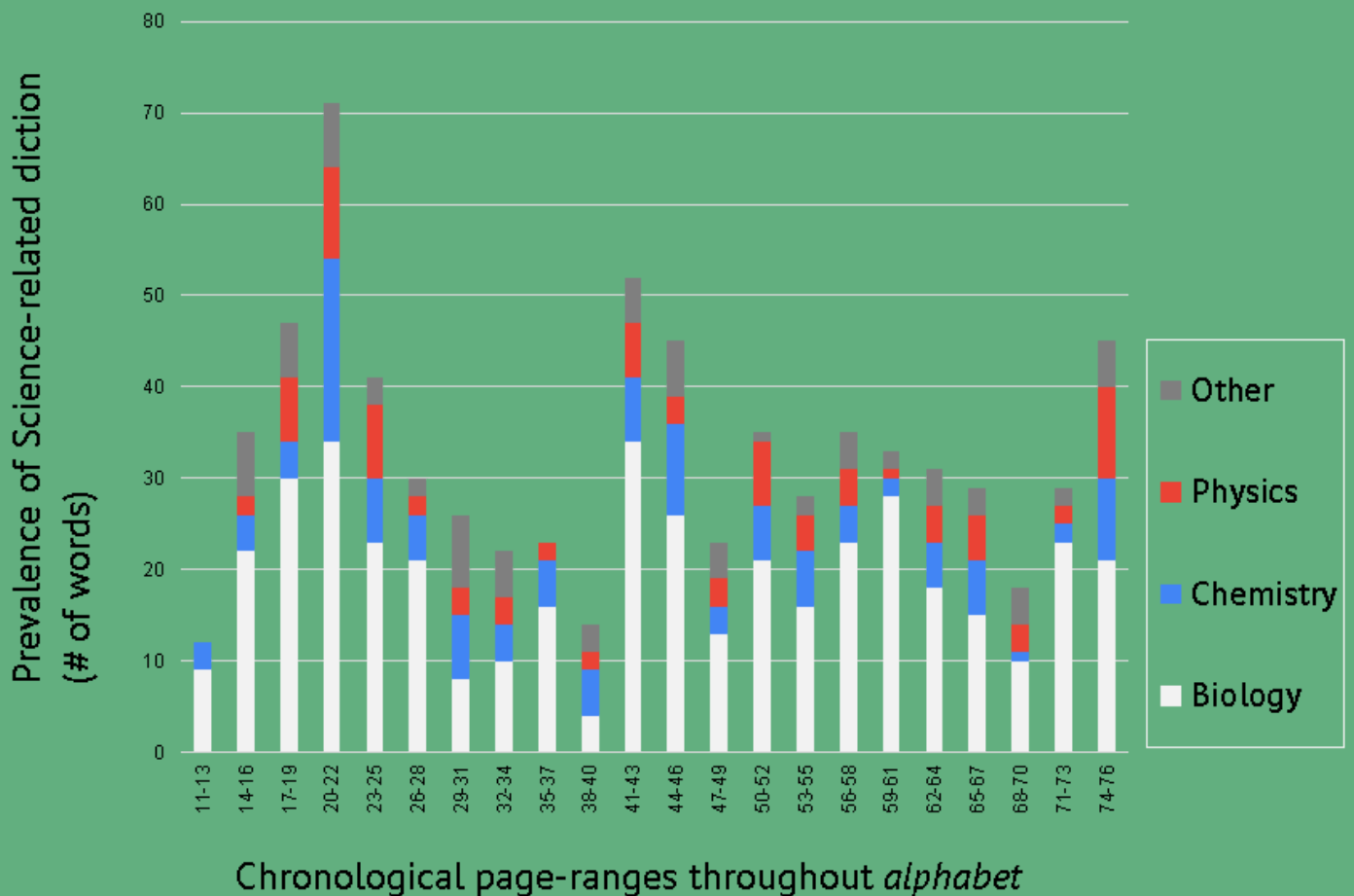
An index and visualization organized to help you navigate how *alphabet* by Inger Christensen uses its diction to emphasize the destructive effects of pursuing science.

DICTION & DUALITY

Inger Christensen's *alphabet* takes the form of a book-length poem that makes a powerful statement regarding the human capacity to destroy the natural world. In accordance with the title, each section of the poem emphasizes one letter of the alphabet. Furthermore, it follows the Fibonacci sequence in the increasing length of each section. Whereas the first section only contains the phrase "apricot trees exist, apricot trees exist," the fourteenth section, keeping with the numerical sequencing, has 610 lines. The poem's progression also increases the complexity in its description of how humans affect the world around them. The work largely does this by describing how different aspects of the world "exist." As she juxtaposes her descriptions of natural beauty with imagery of its destruction, Christensen demonstrates how the blind pursuit of science has led to the decimation of a natural order.

Our index of *alphabet* focuses on words relating to "science." In the poem, the progress of science is paralleled with the destruction of nature. The most basic component of the world, an atom, is slowly taken to the development of the atom bomb and other weapons. Thus, Christensen shows the duality of science: it creates and destroys. Our criteria for science-related words can be broken down as follows: Terms related to biology, chemistry, and physics in the context they were written in were included. As subsets of these subjects, we made sure to include words within more specific scientific fields such as ecology, taxonomy, and astronomy. We also added words like "if" and "detail" that could signify use of the scientific method, as well as the complexity and thought associated with furthering scientific discoveries. More than just measuring the frequency of scientific words, we also categorized the words by which field of science they were a part of, separating them into biology, chemistry, physics, and "other" (this included words about the scientific method, field-specific jargon, and motivations for pursuing science). This provided insight into how different fields of science developed various concepts in the poem.

Prevalence of Science-related diction throughout *alphabet*



Words such as “if” and “detail” marked milestones in the increasing complexity of the poem. With the introduction of “if” in the ninth section, the poem sees a major change from simply stating that things “exist” to having a conditional dependent on “if” something exists. These words created opportunities for the writer to convey more depth in future concepts. Similar to how the growth of a Fibonacci sequence is dependent on the magnitude of previous values, the growth of *alphabet*’s concepts depended on previously established lines of thought. Equally similar to the Fibonacci sequence is the development of science itself. For most of human history, the rate at which technology developed was abysmal. In a few short millennia, however, sticks and stones were replaced by machine guns and nuclear bombs. Therefore, the writing style of *alphabet* mimics the progress of science and technology.

In analyzing our theme, we found that the number of science-related words peaked near poetic shifts. The largest peak on our data visualization occurs around pages 20-22. These pages highlight the natural world utilizing language such as “oxygen” and the frequency of “Earth”. This allows the build-up to “atom bombs exist.” The explosion of science-related terms correlates to the explosion of research done before the usage of atom bombs. Christensen mimics the frenzied state of the world in the centuries leading up to WWII with horrifying imagery about skin, mentions of time and space, and allusions to global cultures. These elements induce confusion and skepticism due to their unfamiliarity. However, following these winding streams of ideas with a staccato about dropping the atom bombs depicts how the destructive power of science dumbfounded everyone. The military-industrial complex skyrocketed the importance of science for warmongers, but philosophers, humanitarians, and scholars demonized the death and destruction caused by science. This statement’s duality is only amplified by the poem’s kairos. *alphabet* was published in 1981 amidst the Cold War, an era when countries piled up warheads despite knowing the carnage they caused. Accordingly, Christensen’s work serves as a warning to those blinded by the wonders and advancements of science.

A breakdown of the scientific fields present in *alphabet*’s diction presents the meanings assigned to each practice. Throughout the poem, biology was the most common category, but later, there were more chemistry terms, and then more physics terms. The poem transitions from nature, to the base components of elements, to the effects that these components can have when manipulated. Whereas biology mostly consists of observing the natural world to learn its mechanisms, chemistry and physics entail tweaking the fabric of our reality to bring out abominations of possibility. The shift from learning science to using knowledge adds to the poem’s commentary on how science brings destruction: Science isn’t inherently responsible for devastation. Rather, the intent with which science

is used causes devastation. However, the poem focuses on the despicabilities of science because it is impossible to separate the scientist's intent from the science they perform. Christensen is critical about this because most leading scientists in her day worked for the military.

Our index gives a one-dimensional glimpse at the multi-faceted motives behind Christensen's work. This distant and narrow view allows the reader to extract more meaning from the text. The themes derived from measuring the frequency of science-related words in *alphabet* have more interpretive freedom. Whereas a novel might contain themes in what the characters experience, experimental poetry allows readers to choose how they interpret the work. Inger Christensen didn't have control over how we collected and organized data from her work. Our interpretation stemmed from the connotations we attached to the words. Viewed in the context of science, *alphabet* is a cautionary tale about advancing our understanding of the world.

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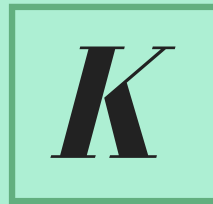
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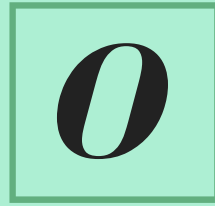
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