

Science and Art in a Time of War

In Walt Whitman's poem "Song of Myself," science is praised as an epic and noble endeavor. In the same collection of poems, *Leaves of Grass*, we find the poem "When I heard the Lern'd Astronomer" in which science is portrayed as aesthetically noxious. Whitman appears to be in contradiction. Yet when we consider this work in its historical and biographical context, we discover that these superficial inconsistencies tell a compelling story about America's groundbreaking poet during a time of explosive discovery, liberation, and heartbreak.

In the 1855¹ edition of "Song of Myself," Whitman writes:

Hurrah for positive science! Long live exact demonstration!

Fetch stonecrop mixt with cedar and branches of lilac;

This the lexicographer or chemist....[sic] this made a grammar

of the old cartouches.

These mariners put the ship through dangerous unknown seas,

This is the geologist, this works with the scalpel, and this a mathematician.

Gentlemen I receive you, and attach and clasp hands with you,

The facts are useful and real....they are not my dwelling....I enter by them to an

area of my dwelling. (51-52)

¹ All dates on the publication of these poems are cross referenced from the citation sources.

Here, Whitman presents science as a bold endeavor which produces an evolving body of knowledge that inspires the artist and augments his or her craft. We can find a similar quote in his 1860 poem, "The Indications." Whitman more explicitly links the artist with the scientist when he writes, "The words of poems are the tuft and final applause of science," concluding:

The builder, geometer, chemist, anatomist, phrenologist, artist—all these
underlie the maker of poems, the answerer.²

Whitman's use of the discoveries, principles, and imagery of science in his work was examined in Joseph Beaver's *Walt Whitman—Poet of Science*. Beaver meticulously presents evidence that Whitman engaged in extensive self-education in the various branches of science during the years 1848-1855, including astronomy, geology, chemistry, physics, mathematics, and anatomy (132-133). Whitman's education was judicious, and though we can find scientific ideas sprinkled throughout his oeuvre, all of these ideas continue to be relevant over a hundred years later. Living in a time of extraordinary scientific discovery and industrial innovation, Whitman was punctilious in cross-referencing, and noted to himself to be "careful to put in only what must be appropriate centuries hence" (Beaver 135). In his preface to the first edition of *Leaves of Grass*, Whitman outlines his motivation for these studies when he writes that scientist are not poets, "but they are the lawgivers of poets and their construction underlies the structure of every perfect poem" (17). Indeed, according to Whitman, the poet should build his or her artistic foundations upon science. We read of Whitman's beautiful definition of the

² This part of the quote comes from the "Death-bed" edition of the poem Whitman published in 1891-1892. The intent is the same, but the later version is more eloquent, see <http://www.bartleby.com/142/1008.html#89>.

“American literat”, presented in his 1856 version of “Poem of Many in One” (later published “As I Sat Alone by Blue Ontario’s Shores” with these lines removed):

An American literat fills his own place, He justifies science—

did you think the demonstrable less divine than the mystical?

...He possesses the superiority of genuineness over fiction and romance,

As he emits himself, facts are showered over with light.

The day-light is lit with more volatile light—the deep between the setting and rising sun goes deeper many fold.³

In his writings predating the American Civil War, Whitman’s enthusiasm for science is filled with ebullient optimism. But by 1865, the bloodiest war ever fought on American soil had exhausted and demoralized the entire nation. Whitman was no exception, and we find a remarkable change in his attitude towards science in the poem “When I Heard the Lern’d Astronomer”:

When I heard the lern’d astronomer,

When the proofs, the figures, were ranged in columns before me,

When I was shown the charts and diagrams, to add, divide, and measure them,

When I sitting heard the astronomer where he lectured with much applause...

³ Notes on “As I Sat Alone by Blue Ontario’s Shores”. Bartleby.com: [Great Books Online](http://GreatBooksOnline.com).

How soon unaccountable I became tired and sick,
 Till rising and gliding out I wander'd off by myself,
 In the mystical moist night-air, and from time to time,
 Look'd up in perfect silence at the stars. (423)

Whitman now finds himself “tired and sick” of the “exact demonstration” he once acclaimed. Beaver attempts to explain the unexpected nature of this poem, but lacks historical context. He supposes that “we all at times grow weary of subjects we study, even when the subject is of great interest to us” (7). This argument grows less convincing when we realize how uninhibited Whitman was in refining his work and purging it of faulty material. For example, his short-term flirtation with the fraudulent but popular movement of Phrenology, which purported that personal characteristics could be determined by the shape of one’s head, was renounced by Whitman when he removed all references to it from his works (Beaver, 135). Furthermore, when we compare the first and last edition of *Leaves of Grass*, we find that many poems had been drastically revised. If “When I Heard the Lern’d Astronomer” had been the product of a fit of temporary weariness, it seems unlikely he would have placed it in his *pièce de résistance*. We are thus motivated to look for a more substantive origin for Whitman’s suddenly negative sentiments.

“When I Heard the Lern’d Astronomer” was first published ten years after “Song of Myself” and at the end of the American Civil War. From his writings we can infer that the war had an immense impact on Whitman. His work shortly after the war is far less romantic and

focuses on the experience of the present with a sharpness that would come naturally to one who has seen immense suffering and death. We read about Whitman volunteering as a Union wound dresser (army nurse), where he provides explicit and heartbreaking detail of the human cost of war. “The Wound Dresser” (1865) closes mournfully:

The hurt and wounded I pacify with soothing hand,

I sit by the restless all the dark night, some are so young.

Some suffer so much, I recall the experience sweet and sad,

(Many a soldier’s loving arms about this neck have cross’d and rested,

Many a soldier’s kiss dwells on these bearded lips.) (457)

The death and misery he witnessed as an army nurse was produced by the struggle between two war machines designed and empowered with the same science and industrial might that Whitman had previously endorsed without reservation. This could only have added to the bitterness of his war-time experience. The war saw many technological innovations, such as the introduction of the legendary ironclads, the use of rapid-fire guns, and the first use of the mechanically fused land mine in warfare. Whitman’s disgust at the deconstruction of that beautiful night’s sky into charts and equations does not contradict the awe he expresses for science in his earlier works when viewed in this historical context. It seems likely that “When I Heard the Lern’d Astronomer” reflects a measure of angst that came with a sobering reassessment of the role of the sciences and industry in human society.

His new-found sobriety lasted for the remainder of his life. For example, in 1874 he writes in “Song of the Universal”:

Lo! keen-eyed, towering Science!

As from tall peaks the Modern overlooking,

Successive, absolute fiats issuing.

Yet again, lo! the Soul-above all science; (380)

Where once he wrote of the practitioners of science and industry as “mariners [putting] the ship through dangerous unknown seas”, now he writes of science as a distant “towering” enterprise issuing “absolute fiats”. We are reminded that the soul is “above all science”. Whitman transmutes the unguarded optimism of science found in his 1860 poem “Chants Democratic 21” into a more cautionary message in its 1871 incarnation “As I Walk These Broad Majestic Days”. In the former poem, Whitman hears the “*éclat of the world*” in the “announcements of recognized things—science, / The approved growth of cities, and the spread of inventions” (see citations). In the later poem, Whitman adds a line in which science and industry are described as “a grand procession to music of distant bugles pouring / triumphantly moving and grander heaving in sight” (617). But the post-war version begins darkly and presciently:

As I walk these broad majestic days of peace,

(For the war, the struggle of blood finish'd, wherein, O terrific Ideal

Against vast odds erewhile having gloriously won,
 Now thou stridest on, yet perhaps in time toward denser wars,
 Perhaps to engage in time in still more dreadful contests, dangers,
 Longer campaigns and crises, labors beyond all others) (616)

In attempting to thoroughly understand Whitman, an impossible but fruitful goal, we must contextualize his work with his life and his times. We must also let the poet speak for himself. He seems to contradict himself, in terms of tone and attitude, when writing on the topic of science. Even when writing about the Civil War, brutal and terrifying as it was, Whitman notes that it led to the emancipation of millions of human beings from the institution of slavery—progress towards “the divine average—Freedom to every slave on the face of the earth” (Whitman, Chants Democratic 21). His work, seen over time, is unified not by any single solid opinion on these broad and important topics, but a mixture of opinions which, put side by side, indicate the possibility that these issues transcend any simplistic moral and aesthetic judgment. What is even more remarkable is that Whitman was quite aware that his work presented the audience with such apparent contradictions. In “Song of Myself”, Whitman wrote:

Do I contradict myself?
 Very well then....I contradict myself;
 I am large....I contain multitudes. (90)

Here is an artist who had the courage to not only admit his contradictions, but to embrace them as part of his broader life's work. He lets us in on the secret: "I am large—I contain multitudes." The message is clear—so do we all, as do all of our various collective endeavors. Whitman wanted to be a poet who wholly embraced one such revolutionary endeavor, science, but to do so he also needed to embrace its contradiction: that science is the enabler of both liberation and misery. As scientific knowledge and technological innovation continue their promised "grand procession", humanity's growing capability for violence and destruction marches along. In the face of these forces, we must not lose sight of our own humanity. Whitman is clear that, beyond the basic biology, what it means to be human is outside of the measure of science. We will find our meaning in our multitudes.

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