

When I Heard the Learn'd Astronomer



POEM TEXT

- 1 When I heard the learn'd astronomer,
- 2 When the proofs, the figures, were ranged in columns
before me,
- 3 When I was shown the charts and diagrams, to add,
divide, and measure them,
- 4 When I sitting heard the astronomer where he
lectured with much applause in the lecture-room,
- 5 How soon unaccountable I became tired and sick,
- 6 Till rising and gliding out I wander'd off by myself,
- 7 In the mystical moist night-air, and from time to time,
- 8 Look'd up in perfect silence at the stars.

scientific methods of “proofs,” “figures,” “charts,” “diagrams,” “add[ition],” “divi[sion],” and other “measure[m]ents.” The speaker recounts the astronomer’s methods unemotionally and without figurative language, indicating the speaker’s lack of enthusiasm for the astronomer’s lecture.

Lines 1-4 of the poem, which relate the astronomer’s lecture, are wordier than the last lines, 5-8. The wordiness of these first lines reflects the speaker’s feeling of being bombarded by astronomer’s words. Even the enthusiastic “applause” of the audience does not change the speaker’s mind. Indeed, the speaker becomes

“unaccountabl[y]” “tired and sick.” The speaker’s “unaccountable” nature stands in direct contrast and opposition to the astronomer’s attempt to measure and account for everything. That is, there are no charts or diagrams that can explain the speaker’s feelings.

Consequently, the speaker chooses to turn away from scientific analysis and be immersed in nature instead. The speaker “ris[es] and glid[es]” out of the room in order to go outside, and describes this departure as “wander[ing] off.” These verbs all suggest a free-spirited nature to the speaker’s actions that contrasts with the rigidness of the astronomer’s lecture. Indeed, once the speaker abandons scientific analysis, the speaker gains a type of freedom. This freedom allows the speaker to leave the confines of the lecture-room and go wherever he wishes in body and mind.

For the speaker, simply being in nature is an almost magical experience and can provide a deeper enlightenment than pure scientific study. The speaker describes his surroundings as “the mystical moist night-air.” The adjective “mystical” is used to describe the magical quality of the night around him.

“[M]ystical” also has spiritual connotations. Therefore, the speaker suggests there is something spiritual and transcendent about directly experiencing nature. As the speaker looks up at the stars, there is “perfect silence.” This “silence” contrasts with the astronomer’s wordy and unbearable lecture. Moreover, this “silence” is “perfect.” Therefore, the speaker experiences perfection, and thus a transcendent understanding, in nature.

While the natural world can be explained in scientific terms, experiencing nature directly can provide an even greater enlightenment. Although the astronomer is “learn’d,” in other words well read and knowledgeable, the poem seems to imply that all the book learning in the world isn’t a substitute for actual experience and reflection. Some things, the poem argues, cannot be explained and are all the greater for it.

Where this theme appears in the poem:



SUMMARY

The speaker listens to an esteemed astronomer lecture on the stars. The astronomer displays various mathematical proofs and evidence in columns to the audience in support of a scientific argument. The astronomer also displays various charts and diagrams and explains the mathematical calculations behind them. The speaker sits in the audience, who all applaud the astronomer’s lecture with great enthusiasm. Very quickly and unexplainably, the speaker finds the whole lecture unbearable. Therefore, the speaker rises and leaves the lecture room alone. Outside, it is nighttime and the air is damp. There is a magical quality to the surrounding nature. Occasionally, the speaker looks up at the beautiful stars overhead and embraces the silence of the night.



THEMES



KNOWLEDGE, NATURE, AND EXPERIENCE

In “When I Heard the Learn’d Astronomer,” the speaker attends an astronomer’s public lecture on the stars. While the audience enjoys the astronomer’s scientific explanations and mathematical equations, the speaker finds them unbearable. Indeed, the speaker believes that there is a power and beauty in nature that cannot be measured or explained. Rather, the poem seems to suggest that one can simply experience nature itself to gain a different—perhaps even deeper—understanding of the world.

The speaker finds the astronomer’s scientific perspective on the stars intolerable. The speaker lists the astronomer’s

- Lines 1-8



INDIVIDUALITY AND FREEDOM

In "When I Heard the Learn'd Astronomer," the speaker attends an astronomer's lecture on the stars.

The astronomer is an established expert in the field, and the audience is clearly appreciative of the astronomer's knowledge. However, the speaker alone finds the astronomer's rigid teachings foolish and leaves the lecture-room. The poem implicitly praises this act, and as such stresses the importance of thinking for oneself and questioning accepted wisdom. Doing so, the poem seems to suggest, is necessary to gain a freedom of both spirit and mind.

The speaker finds the astronomer's lecture narrow-minded and intolerable, even though the astronomer is described as being "learn'd." The adjective "learn'd" implies a sanctioned, accepted level of academic achievement, as well as a depth of knowledge. Yet the speaker is soon "sick and tired" of being lectured to. By contrast, it appears that most of the audience adores the astronomer's lecture, lapping it up without question; there is "much applause in the lecture room."

Despite the apparent enthusiasm of the rest of the audience, however, the speaker "wander[s] off" and leaves the lecture hall, and importantly does so "by myself"—alone. The speaker physically leaves the confines of the lecture hall for the expanse of nature outside, gaining physical freedom. This physical freedom, in turn, mirrors the speaker's emotional and intellectual freedom. In nature, the speaker is about to reflect on the night sky "in perfect silence"—without anyone else telling the speaker what to think, or how to interpret what the speaker sees.

This state of "perfection" further indicates the speaker's own state of contentment and enlightenment. It suggests that the stars are in fact *best* studied in silence, by oneself, with no companion apart from one's own mind. As such, the poem suggests that this state of "perfect" silence and freedom often requires going against the crowd and questioning what one is taught—above all, thinking for oneself.

Where this theme appears in the poem:

- Lines 1-6



LINE-BY-LINE ANALYSIS

LINES 1-2

*When I heard the learn'd astronomer,
When the proofs, the figures, were ranged in columns before me,*

The first two lines of "When I Heard the Learn'd Astronomer" establishes the speaker and setting of the poem. The speaker listens to a "learn'd astronomer" who is displaying "the proofs, the figures [...] ranged in columns." Immediately, the poem sets up a contrast between the speaker, who is silently listening, and the astronomer, who is speaking and lecturing on his expertise. In this case, the astronomer is lecturing on celestial objects of the universe, specifically the stars.

The lines, therefore, stress the highly educated and scientific nature of the astronomer. The astronomer is described as "learn'd," which indicates the astronomer's high level of education and years of study. Moreover, the astronomer has calculated "proofs" and "figures" to show the audience, requiring mathematical expertise. The astronomer displays these mathematical evidences in "columns," indicating a methodical and technical mind.

"When I Heard the Learn'd Astronomer" is not written in any particular [form](#). Rather, it is an example of Whitman's characteristic [first-person free verse](#). The first line, however, is written in the [stress](#) pattern of [trochaic pentameter](#) (stressed-unstressed):

When I | heard the | learn'd as- | tronon- | mer,

The downward, falling rhythm of trochaic meter reflects the downward progression of the speaker's mood while listening to the astronomer's lecture. Moreover, the regularity of the rhythm stresses the monotony of the lecture. The last trochee in the line is missing a syllable (this is called [catalexis](#)), ending the line on a forceful note, capturing the assertiveness of the astronomer. Additionally, in line 1, the [internal slant rhyme](#) between "heard" and "learn'd" enhances the rhythm and musicality across the line.

Line 2 does not contain such regular trochaic meter:

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

However, the two instances of [caesura](#) after "proofs" and "figures" add a strong sense of rhythm to the line. The use of [anaphora](#) in the opening "When" in lines 1 and 2 also creates a rhythm through repetition. At the same time, this anaphora across the two lines further emphasizes the monotony of the setting, a monotony which will be developed in the next two lines.

LINES 3-4

*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 in the lecture-room,*

In lines 3 and 4 of "When I Heard the Learn'd Astronomer," the

speaker continues listening to the astronomer lecture on the stars. In line 3, the astronomer displays various scientific evidence in the form of "charts and diagrams," and shows the audience the mathematics behind these charts—that is, how to "add, divide, and measure them." Therefore, line 3 builds on the scientific evidence the astronomer displayed in line 2.

Similarly, the phrase "the charts and diagrams, to add" builds on the [asyndeton](#) (or deliberate lack of conjunctions like "and") in line 2's "the proofs, the figures." Line 3 isn't technically asyndeton, but it employs a similar style as line 2, creating a sense of accumulation. In the first four lines of the poem, each successive line is longer than the last. Moreover, these lines are much more wordy than the next four lines of the poem (5-8). Asyndeton, in conjunction with wordiness and the piling up of scientific methods, evokes a sense of being overwhelmed by the astronomer's lecture.

As the poem has already established the contrast between the silent speaker and the lecturing astronomer, the poem suggests a further contrast between the minds of the speaker and the astronomer. The speaker, the poem suggests, finds the astronomer's lecture overwhelming and unbearable. The speaker even feels assaulted by the astronomer's words. Indeed, as the poem continues, the speaker feels more and more negatively toward the astronomer, reflecting an opposition in body and mind.

In terms of [meter](#), line 3 contains nine pairs of unstressed-[stressed](#) syllables that mark [iambic](#) meter:

When I | was shown | the charts | and di- | agrams, |
to add, | divide, | and mea- | sure them,

Similar to line 1, the regularity of the meter evokes the monotony of the astronomer's lecture. However, the switch to the rising rhythm of iambic meter reflects the speaker's rising resolve to leave the lecture, and predicts the heightening of the speaker's mood at the end of the poem.

LINES 5-6

*How soon unaccountable I became tired and sick,
Till rising and gliding out I wander'd off by myself,*

In "When I Heard the Learn'd Astronomer," lines 5 and 6 represent a drastic shift in tone and content. In line 5, the speaker becomes "unaccountabl[y]" "tired and sick" of the astronomer's lecture. The word "unaccountable" indicates that the speaker's negative feelings toward the astronomer are seemingly unexplainable. However, this adjective also directly contrasts with the astronomer's act of explaining—literally *accounting* for—everything in the lecture. After all, the astronomer uses various methods of mathematics "to add, divide, and measure" the stars.

Consequently, in the next line, the speaker physically leaves the lecture room and, "rising and gliding," "wander[s] off" alone. The

[slant rhyme](#) between "rising" and "gliding" evokes a mood of playful freedom. In this line, the speaker feels relieved and free after being trapped in the claustrophobic lecture room with the applauding audience and the astronomer. "[R]ising" also indicates an ascent, mirroring the speaker's rising and improving mood. "[G]liding" is a smooth, unflinching movement. Thus, the speaker does not hesitate in the act of leaving the room—rather, the speaker's resolve is firm and unflinching.

The act of "wander[ing]" also indicates a lack of destination. The speaker does not have a calculated or exact goal in mind, unlike the astronomer. Rather the speaker feels free to let body and mind explore at will. Moreover, the speaker leaves the lecture room alone. The speaker therefore is courageous enough to go against the crowd in order to pursue the speaker's own sense of individuality and beliefs.

Lines 5 and 6 have noticeably fewer words than the previous line. Indeed, in general, the second half of the poem is shorter than the first half of the poem. Whitman deliberately chooses to use less words to describe the speaker's actions in the second half, contrasting with the description of the astronomer's lecture in the first half. This choice emphasizes the difference between the verbose nature of the astronomer and the quiet, more reflective nature of the speaker.

LINES 7-8

*In the mystical moist night-air, and from time to time,
Look'd up in perfect silence at the stars.*

In the last two lines of the "When I Heard the Learn'd Astronomer," the speaker emerges in the natural world outside. The speaker is immersed in the "mystical moist night-air." As an adjective, "mystical" suggest a magical quality to the scene that cannot be explained or defined in scientific terms, though the astronomer may wish to do so. Therefore, the speaker embraces the surrounding magic of the environment, which the astronomer might otherwise resist.

In this magical "night-air," the speaker looks up "from time to time [...] in perfect silence at the stars." The speaker's act of looking up is not calculated or measured but rather "from time to time." Therefore, the speaker acts according to a whimsical desire. This whimsical lack of schedule reflects the speaker's personal freedom. Moreover, the speaker looks up in "perfect silence." This "silence" contrasts with the wordiness of lines 1-4 and the wordiness of the astronomer's lecture.

Therefore, the speaker's condition in these last two lines contrasts in several ways with the first four lines of the poem. In lines 7 and 8, the speaker is physically outdoors versus indoors in the lecture room, as was the case in lines 1-4. Moreover, the environment is "mystical" rather than scientific. Additionally, silence, rather than speech, permeates the natural environment. Furthermore, the shortness of these two lines reflects the "perfect silence" of the surrounding environment. Moreover, in the second half of the poem, Whitman breaks the

monotonous [anaphora](#) of "When," beginning each line with a different word. There is, thus, a delightful and dynamic variance in lines 5-8.

In terms of [meter](#), line 8 is written in the [stress](#) pattern of [iambic pentameter](#) (unstressed-stressed):

Look'd up | in per- | fect si- | lence at | the stars.

This rising meter contrasts with the falling meter of the first line and reflects the speaker's uplifted mood. The difference in meter, therefore, clearly shows the speaker's emotional progression and rise in mood across the poem.

All of these qualities differentiate the peaceful, magical, natural setting from the loud, monotonous lecture room. The poem, therefore, clearly stresses the importance and necessity of simply experiencing nature. For the speaker, the greatness and power of nature is unexplainable, a quality which does not lessen but rather heightens its magic and perfection.



SYMBOLS



THE ASTRONOMER

An astronomer is a scientist who studies objects outside of earth, like planets or, in the case of the poem, the stars. As such, in "When I Heard the Learn'd Astronomer," the astronomer [symbolizes](#) scientific knowledge and humanity's desire to understand nature through the means of science.

In the first line of the poem, the astronomer is described as "learn'd." The adjective "learn'd" signifies the astronomer's acquired knowledge through academic study. The astronomer is therefore an established authority on the subject of the stars. As an educated man of science, the astronomer has plentiful "proofs," "figures," "columns," "charts," and "diagrams" to show to his audience. The audience, in line 4, is quite enthusiastic regarding the astronomer's lecture, and there is "much applause in the lecture-room."

The speaker, however, is "tired and sick" of the astronomer's lecture. The speaker, in fact, finds a deeper enlightenment and "perfect[ion]" simply by going outside to look at the stars. The astronomer, therefore, represents what the speaker views as humanity's misguided desire to measure and understand nature through science.

Where this symbol appears in the poem:

- Line 1
- Lines 2-3
- Line 4



STARS

Physically, stars are glowing balls of gas. However, seen from the earth, the stars represent the mystical, the spiritual, and the unknown. As such, in "When I Heard the Learn'd Astronomer," stars [symbolize](#) the awe-inspiring natural world.

In the first four lines, the astronomer lectures on the stars. To the astronomer, the stars are something that can be explained through "proofs," "figures," "columns," "charts," and "diagrams." Moreover, the stars can be understood by "add[ing], divid[ing], and measur[ing] them."

However, in line 5, the speaker is "tired and sick" of the astronomer's scientific explanations of the stars. Therefore, the stars, the poem suggests, are things that cannot be fully measured or explained through science. Rather, the speaker, upon going outside and looking up at the stars, stands in a state of "perfect silence." This state of "perfect[ion]" implies that the speaker has gained a deeper enlightenment simply by experiencing the beauty of the stars rather than trying to explain or measure them. By the end of the poem, the stars therefore represent the natural world's mysticism, which is beyond human analysis and that needs to be experienced in order to be fully appreciated.

Where this symbol appears in the poem:

- **Line 8:** "Look'd up in perfect silence at the stars."



POETIC DEVICES

IMAGERY

[Imagery](#) is essential in "When I Heard the Learn'd Astronomer." In particular, Whitman uses visual and auditory imagery to contrast the lecture room of the first half of the poem with the great outdoors of the second half. Consequently, by highlighting the contrast, Whitman suggests the preferability of the great outdoors over the lecture room, along with each setting's associated philosophies.

The auditory imagery (i.e. the things the speaker hears) highlights the contrast between the unbearable noisiness of the lecture room and the peaceful silence of the great outdoors. In lines 1 and 4 the speaker listens to the astronomer's lecture. Moreover, in line 4, the imagery highlights that there is "much applause" in the room. The noise of the astronomer's wordy lecture builds up to this thunderous applause and is, consequently, too noisy for the speaker to take.

In contrast, the imagery of the second half of the poem highlights the peace and quiet of the outdoors. In line 6, the speaker departs the lecture room, leaving such a noisy setting. Additionally, the speaker departs alone; thus, no one talks to or

around the speaker. Moreover, the last line of the poem stresses the "perfect silence" of nature. As the adjective "perfect" is attached to the idea of "silence," the poem makes clear its preference for the "silence" and peace of the outdoors.

The visual imagery of the poem also highlights the speaker's preference for the great outdoors. Lines 2 and 3 are filled with scientific and mathematical imagery of "proofs," "figures," "columns," "charts," and "diagrams." These images are presented in a list-like manner, highlighting the dull monotony of the astronomer's lecture. In contrast, the latter half of the poem that describes the great outdoors is filled with playful, almost fairy-tale like imagery. In line 6, the speaker, for example "ris[es] and glid[es]" out of the lecture room. The act of "rising and gliding" is associated with ethereal figures such as fairies or angels, as it is a far more graceful act than a lumbering walk. Therefore, simply by leaving the lecture room, the speaker gains a quality of etherealness.

In a similar vein in line 7, the poem uses imagery to describe the "mystical" quality of the surroundings, which are filled with "moist night-air." Additionally, the last line ends on an image of the "stars." Consequently, the imagery of the last four lines emphasizes the magical—almost divine—quality of the outdoors. The poem, thus, clearly suggests that nature contains peace and divinity that cannot be found within manmade institutions.

Where Imagery appears in the poem:

- Line 1
- Line 2
- Line 3
- Line 4
- Line 6
- Line 7
- Line 8

REPETITION

[Repetition](#) occurs in various forms throughout "When I Heard the Learn'd Astronomer." Specifically, Whitman uses [anaphora](#), [diacope](#), and [polyptoton](#) to emphasize certain ideas and phrases and to create a reading experience that mirrors the speaker's experience.

The first four lines of the poem begin with the word "When," an example of anaphora. This repetition groups the first four lines together, emphasizing the fact that they all describe the scene inside the lecture room. Moreover, the monotony of the repetition mirrors the monotony of the lecture for the speaker. The anaphora, therefore, highlights the contrast between the first four lines of the poem, which concern the unbearable monotony of the lecture room, and the last four lines of the poem, which concern the dynamic beauty of the great outdoors.

Line 4 also contains an example of polyptoton in "lectured" and "lecture-room," in which the word "lecture" is repeated in different forms. This repetition emphasizes not only the astronomer's lecture, but the fact that even the speaker's indoor surroundings ("lecture-room") are designed for and defined by the lecture. The speaker, therefore, cannot find solace in the beauty of the room or architecture. Consequently, the polyptoton highlights the speaker's rising sense of claustrophobia and desire to physically escape the room.

Repetition can also enhance the musicality and rhythm of the poem. In line 7, the poem uses diacope in the phrase "time to time." The aesthetic beauty of the line mirrors the aesthetic beauty of the speaker's natural surroundings. The repetition also emphasizes the fact that the speaker's enjoyment of the natural surroundings is not calculated or scheduled. Rather, the speaker looks up whenever they wish to, and this freedom and independence only serves to increase, not detract from, the speaker's pleasure in nature.

Where Repetition appears in the poem:

- **Line 1:** "When I," "astronomer"
- **Line 2:** "When"
- **Line 3:** "When I"
- **Line 4:** "When I," "astronomer," "lectured," "lecture-room"
- **Line 7:** "time to time"

CAESURA

[Caesura](#) occurs six times throughout "When I Heard the Learn'd Astronomer." Whitman uses caesura—sometimes in tandem with [asyndeton](#) (in which conjunctions like "and" are omitted)—to slow down the reading of the lines. This allows those lines to resonate with the speaker's experience in the poem, or to linger in the [imagery](#).

Most of the instances of caesura in the poem occur in lines 2 and 3 in conjunction with asyndeton. Line 2, for example, could be written as such:

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

Written in this way, the line would be read much smoothly and quickly. Instead, line 2 contains two commas as a result of the use of asyndeton. Similarly, line 3 also contains three commas, creating several pauses across the line. Both these lines describe the astronomer's lecture which, to the speaker, is unbearably monotonous and long. Therefore, the caesuras' constant stops and starts significantly slow down the reading of the lines and mirror the speaker's experience.

Lines 5-8, on the other hand, contain only one instance of caesura, in line 7. The pause occurs after the speaker describes the surrounding "mystical moist night-air." The magical beauty

of the outdoors contrasts sharply with the dull science of the lecture room. Here, the single pause doesn't create a halting pattern, but rather allows readers to linger in the beauty of nature, just as the speaker lingers and embraces the surroundings. By mirroring the speaker's experience, caesura allows readers to more closely empathize with the speaker physically and philosophically.

Where Caesura appears in the poem:

- **Line 2:** "proofs, the," "figures, were"
- **Line 3:** "diagrams, to add, divide, and"
- **Line 7:** "night-air, and"

ALLITERATION

[Alliteration](#) occurs frequently throughout "When I Heard the Learn'd Astronomer." In each instance, Whitman uses alliteration to enhance the musicality of the language, highlight certain phrases or [images](#), and create a reading experience that reflects the speaker's experience and mood.

For example, in lines 2 and 3, the repetition of the /w/ sounds in "When," "were" and "was" adds to the musicality of the poem. Moreover, in line 3, the smooth and swift alliteration of /w/ sounds contrasts sharply with the heavier and slower alliteration of /d/ sounds in "diagrams" and "divide." These thudding /d/ sounds emphasize the astronomer's slow and laborious lecture, which is full of various complex scientific and mathematical proofs.

In a similar vein in line 5, the [sibilant](#) /s/ sounds in "soon" and "sick" mirror the speaker's experience of the poem. In line 5, the speaker is decidedly "tired and sick" of the astronomer's lecture. Thus, these hissing /s/ sounds reflect the speaker's dissatisfaction and negative mood.

However, once the speaker is immersed in the great outdoors, the alliteration softens to reflect the quiet of the surroundings. The alliteration of soft /m/ sounds in "mystical" and "moist" in line 7 highlights the gentle peace of the night. These lead up to the alliteration of /s/ sounds in "silence" and "stars" in the last line, which now take on a whispery, rather than hissing, quality. Alliteration, therefore, used in conjunction with [imagery](#), evokes the speaker's emotions in order to enhance the reading experience of the poem.

Where Alliteration appears in the poem:

- **Line 1:** "When"
- **Line 2:** "When," "were"
- **Line 3:** "When," "was," "diagrams," "divide"
- **Line 4:** "When," "astronomer," "where," "lectured," "with," "applause," "lecture-room"
- **Line 5:** "soon," "sick"
- **Line 6:** "myself"

- **Line 7:** "mystical," "moist," "time," "to," "time"
- **Line 8:** "silence," "stars"

CONSONANCE

[Consonance](#) appears in every line of "When I Heard the Learn'd Astronomer." Whitman uses consonance to enhance the musicality of the language and reflect the speaker's experience in the lines.

In line 2, the consonant /r/ sounds in "proofs," "figures," "were," "ranged," and "before" twists the reader's tongue in a convoluted manner. The convoluted twists of the /r/ sounds reflect the convoluted intricacy of the astronomer's lecture. In the next line, the heavy and thudding consonant /d/ sounds in "diagrams," "add," and "divide" lends a sense of laboriousness to the words. This mirrors the speaker's view of the laboriousness of the astronomer's scientific and mathematical lecture.

Similarly, the consonant /t/ sounds in line 5 also mirror the speaker's emotional viewpoint in the poem. In line 5, the speaker can no longer bear listening to the astronomer's lecture. The sharp, staccato /t/ sounds in "unaccountable" and "tired" reflect the impatience of the speaker to leave the lecture-room and escape the lecture.

In line 6, after escaping to the great outdoors, the consonance turns softer with the repetition of /l/, /f/, and /s/ sounds in "Till," "rising," "gliding," "off," and "myself." These silky and soft sounds evoke the gentle peace of the outdoors. The consonance throughout the poem, therefore, highlights the contrast between the simple quiet of natural world and the convoluted laboriousness of the astronomer's noisy lecture. Thus, the consonance mirrors the speaker's views on the two settings and brings the reader and speaker closer together.

In line 7, the soft consonance of /m/ sounds is paired with the sharper consonance of /t/ sounds in "mystical," "moist," "night-air," "time," and "to," suggesting that the gentle peace of the natural world transforms into something more lively and dynamic. Indeed, in the next line of the poem, bright stars make an appearance. The stars, glittering in the sky, enliven and beautify the peace of the night. The consonance, therefore, mirrors both the speaker's emotional and physical experiences in the poem, intensifying them for the reader.

Where Consonance appears in the poem:

- Line 1
- Line 2
- Line 3
- Line 4
- Line 5
- Line 6
- Line 7
- Line 8

ASSONANCE

There are many instances of [assonance](#) throughout "When I Heard the Learn'd Astronomer." In the poem, Whitman uses assonance to enhance the sonic qualities of a line, draw attention to particular phrases and ideas, and accentuate the content.

In the first line, the assonance in "heard" and "learn'd" draws attention to the individual words. It highlights the role of the speaker as a passive listener in the audience and the astronomer as a highly-educated lecturer. By contributing to the [slant rhyme](#) between these two words, assonance also suggests a playful, even sardonic undertone. The descriptions of these initial roles are not, therefore, entirely sincere. Indeed, by the end of the poem, the speaker is no longer a passive listener and the astronomer is shown to be limited in his understanding of nature.

In line 3, the assonance of the long /i/ sounds in "I," "diagrams," and "divide" draws out the length of each word. The lengthening of these words mirrors the lengthiness of the astronomer's lecture. To the speaker, the astronomer's lecture never seems to end. Therefore, this reading experience created by the assonance brings readers closer to the speaker's point of view. Similarly, in line 5, the assonant /ou/ sounds in "How" and "unaccountable" evoke the sounds of a groan. Therefore, the assonance embodies the speaker's unhappy mood as described in the line.

In the same vein, in line 6, the assonant long /i/ sounds in "rising" and "gliding" also draw out the lengths of the words. This time, however, the smooth lengthening of the words resonates with the smooth, rising action of the verbs. The next line also contains assonant long /i/ sounds in "night-air," and "time." The lengthening of the words due to the assonance reflects the speaker's desire to linger and spend a long time in the great outdoors. The assonance, therefore, heightens the speaker's emotions for the reader.

Where Assonance appears in the poem:

- **Line 1:** "heard," "learn'd," "astronomer"
- **Line 2:** "figures," "were"
- **Line 3:** "I," "diagrams," "add," "divide," "measure," "them"
- **Line 4:** "When," "heard," "astronomer," "where," "lectured," "lecture-room,"
- **Line 5:** "How," "soon," "unaccountable," "I," "tired," "sick"
- **Line 6:** "Till," "rising," "gliding," "I," "wander'd," "off," "by," "myself"
- **Line 7:** "In," "mystical," "night-air," "time," "time"

ASYNDETON

[Asyndeton](#) occurs once in "When I Heard the Learn'd Astronomer," followed by a related use of [caesura](#). Whitman uses these moments to create a reading experience that

mirrors the speaker's emotional progression in the poem.

Whitman only applies asyndeton to the first half of the poem. These first four lines are primarily dedicated to showing the negative qualities of the astronomer's lecture and the lecture room itself. Through the use of other devices such as [imagery](#), [caesura](#), and [repetition](#), for example, Whitman clearly conveys the noisiness, verbosity, and monotony of the astronomer's lecture and, therefore, the claustrophobic quality of the lecture room. Whitman's use of asyndeton serves the same purpose, emphasizing the unbearableness of the astronomer's lecture.

In line 2, Whitman uses asyndeton in the phrase "the proofs, the figures." By omitting the conjunction "and" and replacing it with a comma, Whitman begins to create a list of mathematical and scientific evidence. Line 3's phrase "the charts and diagrams, to add," while not technically asyndeton, builds on this use of asyndeton in a similar manner. The listing of these mathematical and scientific evidences adds to the sensation of them piling up on the speaker and, also, the reader. This emphasizes the claustrophobic quality of the astronomer's lecture and the speaker's urgency to escape the lecture room. The asyndeton in the poem, therefore, enhances the reader's experience of the speaker's emotions.

Where Asyndeton appears in the poem:

- **Line 2:** "the proofs, the figures"
- **Line 3:** "the charts and diagrams, to add"



VOCABULARY

Learn'd (Line 1) - A contraction of "learned," meaning well read and knowledgeable through study; scholarly. In the poem, the astronomer is highly educated and knowledgeable.

Astronomer (Line 1) - A scientist who studies celestial objects, such as planets or stars. Here, the poem suggests the astronomer is speaking particularly of the stars.

Proofs (Line 2) - A mathematical or logical argument using evidence to establish a conclusion. Here, the astronomer displays mathematical proofs during the lecture to support various claims.

Ranged (Line 2) - Arranged. Here, the astronomer arranges various mathematical proofs and figures before the speaker and audience.

Unaccountable (Line 5) - Inexplicable; unexplained; unable to account for. The speaker is unable to account for being so suddenly "tired and sick" of the astronomer's lecture. This word choice also suggests that the speaker cannot be *counted*, in contrast with the lecturer's many "charts and diagrams" which "add, divide, and measure."

Wander'd (Line 6) - A contraction of "wandered," meaning

walking aimlessly. The speaker walks aimlessly out of the lecture room.

Look'd (Line 8) - A contraction of "looked." Once outside, the speaker looks up at the stars.



FORM, METER, & RHYME

FORM

"When I Heard the Learn'd Astronomer" is not written in any particular [form](#), [meter](#), or [rhyme scheme](#), but rather in [free verse](#). Indeed, Whitman is often described as the "father of free verse," as his poems popularized free verse for English-language audiences. Like much of Whitman's work, "When I Heard the Learn'd Astronomer" is written in [first person](#).

Although the poem does not follow any particular form, structurally it is an octave that can be divided into two sections of four lines each. All of the lines are [end-stopped](#), as is typical of Whitman. The two sections are similar to quatrains, but without stanza breaks. Whitman clearly distinguishes the first four lines of the poem from the latter four lines through literary devices and content. The first four lines all begin with the word "When," an example of [anaphora](#). This repetitive and monotonous structure does not occur in the last four lines. Additionally, the first four lines are much lengthier in general than the last four. Moreover, the first half is filled with technical language describing scientific and mathematical terms, whereas the second half is more [imagistic](#).

The setting of the first half of the poem is located inside a "lecture-room," whereas the setting of the second half of the poem is located outside beneath the stars. Therefore, repetition, monotony, and verbosity are associated with the "lecture-room," while dynamism, variation, and peace are associated with the natural outdoors. The dry technicality of the language in the first half highlights the beauty of the language in the second half of the poem. Therefore, although Whitman devotes an equal number of lines to both settings, the poem clearly prizes the natural setting through the use of vivid and beautiful imagery in the second half of the poem. The form of "When I Heard the Learn'd Astronomer" thus emphasizes the poet's preference for experiencing, rather than scientifically analyzing, nature.

METER

"When I Heard the Learn'd Astronomer" is written in [free verse](#), meaning it does not follow a strict [meter](#) or [rhyme scheme](#). This is typical of Whitman's style, as he has sometimes been called the "father of free verse." The lack of restrictions of form reflect the speaker's freely thinking mind and freely moving body throughout the poem.

Nevertheless, "When I Heard the Learn'd Astronomer" does contain occasional moments of regular meter despite the larger

lack of meter. In these instances, the meter of the poem mirrors the speaker's experience and, therefore, allows readers to empathize more closely with the speaker's experience.

Take, for example, the first line of the poem, which is written in the [stress](#) pattern of [trochaic pentameter](#) (stressed-unstressed):

When I | heard the | learn'd as- | trono- | mer,

The falling rhythm of trochaic meter reflects the speaker's falling mood while attending the astronomer's lecture. Indeed, the speaker soon feels "tired and sick" of the lecture, finding the astronomer's scientific explanations of nature unbearable and shortsighted. Additionally, the regularity of the rhythm reflects the monotony of the astronomer's lecture in the speaker's mind. The last foot of the line is missing a syllable (a device called catalexis), ending the line on a stressed note and suggesting the oppressiveness of the lecture.

Other lines in the poem, such as line 3, are written in the unstressed-[stressed](#) pattern of [iambic](#) meter:

When I | was shown | the charts | and di- | agrams, |
to add, | divide, | and mea- | sure them,

The switch to the rising rhythm of iambic meter reflects the speaker's rising resolve to leave the lecture room. The rising rhythm also predicts the speaker's rising mood after heading outside and being surrounded by nature.

The last line is also written in iambic meter and directly contrasts with the trochaic meter of the first line:

Look'd up | in per- | fect si- | lence at | the stars.

This rising rhythm reflects the speaker's rising mood, in contrast with the speaker's negative mood in the first line. Consequently, the meter of the poem emphasizes the speaker's progressive change in mood from the beginning of the poem to the end.

RHYME SCHEME

"When I Heard the Learn'd Astronomer" is written in [free verse](#) and therefore does not follow any strict [meter](#) or [rhyme scheme](#). The lack of formal restriction is typical of Whitman's work and, in this case, reflects the speaker's free-spirited mindset in the poem.

However, although the poem does not contain any [end rhymes](#), the poem does contain several instances of [internal half rhymes](#). These instances of internal rhyme enhance the musicality of the poem and highlight certain words and images.

In line 1, for example, the half rhyme between "heard" and "learn'd" highlights both the role of the speaker as an audience

member listening to the lecture and the highly-educated background of the astronomer. Additionally, as the poem goes on to show the limits of the astronomer's scientific insight, the singsong quality of the internal rhyme adds a sardonic tone to the adjective "learn'd."

In line 6, the internal rhyme between "rising" and "gliding" emphasizes the musical beauty of the language and, thus, the beauty of the speaker's movements while leaving the lecture-room. The internal rhyme, therefore, highlights the nuances of the poem's attitudes toward the speaker and the astronomer.



SPEAKER

The speaker of the poem is unnamed and genderless. One might argue that Whitman himself is the speaker, but this is by no means definite. Regardless, the speaker cannot relate to scientific explanations of nature. Indeed, the speaker finds science inadequate to explain the magic of nature. The speaker prefers experiencing nature in person rather than listening to an astronomer's lecture.

Consequently, in line 6, the speaker walks out of the lecture-room alone, despite the fact that everyone else enjoys the lecture. This act suggests the speaker feels a strong sense of individuality and is not afraid to go against the crowd to embrace their individuality. For the speaker, experiencing nature is a "mystical" experience and evokes a feeling of "perfect[ion]" and enlightenment that no science can explain.



SETTING

The setting of "When I Heard the Learn'd Astronomer" changes as the poem progresses. In the first half of the poem, the setting is a lecture room where an astronomer is lecturing to an audience on the subject of the stars. The speaker, however, soon leaves this lecture room and goes outside. It is nighttime and the air is slightly damp. The natural world is filled with a "perfect silence." Overhead, stars shine beautifully in the sky.

While the poem could be seen as specifically set during the mid 19th century when it was written, the poem can describe any time in which astronomy and scientific methods are used to explain the natural world.



CONTEXT

LITERARY CONTEXT

Whitman first published "When I Heard the Learn'd Astronomer" in 1865 in his poetry collection *Drum-Taps*. The poem appeared two years later in the fourth edition of *Leaves of Grass*, the most celebrated collection of Whitman's career. "When I Heard the Learn'd Astronomer" shares many

characteristics, both thematically and stylistically, with other poems in *Leaves of Grass*. Like most of the other poems in *Leaves of Grass*, "When I Heard the Learn'd Astronomer" is written in first-person [free verse](#). As in "[Song of Myself](#)," there is a joyousness and freedom to the formlessness of verse in "When I Heard the Learn'd Astronomer."

Many of the poems in *Leaves of Grass* also praise the individual and individuality, along with the universality of nature. "When I Heard the Learn'd Astronomer" is no different, as it is a reflection on the power of experiencing nature first hand in order to gain a deeper, transcendent understanding of it. One experiences nature on an individual level. However, through this individual connection, one gains access to a greater universality in experience.

Whitman's philosophy and work was heavily influenced by the [Transcendentalism](#) of [Ralph Waldo Emerson](#) and [Henry David Thoreau](#). Transcendentalism values the individual experience over institutional knowledge. Thus, the speaker of "When I Heard the Learn'd Astronomer" very much believes in the power of subjective experience over scientific evidence. Additionally, for Transcendentalists, nature must be treasured, protected, and experienced in person. Moreover, there is a divine, transcendental, or "mystical" quality to nature.

As the so-called "father of free verse," Whitman's poetry influenced generations of writers in American that followed him. His breaking away from traditional forms influenced Modernists like [Ezra Pound](#) and [T.S. Eliot](#). Moreover, Whitman's observant, first-person speakers who exalt mystical experience greatly influenced [Beat poets](#) such as [Allen Ginsberg](#).

HISTORICAL CONTEXT

In the 1830s, Transcendentalism was a philosophical and social movement which concerned itself with questions of morality. Transcendentalists believed in the inherent goodness of the individual, the divinity of nature, and the necessity of turning away from the excesses of industrialization.

Three decades later in 1865, when Whitman first published "When I Heard the Learn'd Astronomer," the American Civil War finally came to an end. The Civil War was one of the earliest wars which incorporated industrial weaponry, due to the advancements in machinery and the Industrial Revolution. One of the most destructive wars in American history, the Civil War was fought primarily over the moral issue of the institution of slavery.

For Whitman, the issues the Transcendentalists raised—that later came to a head during the Civil War—were ones he wished to interrogate in his own work. Like other writers and artists during this time, Whitman was interested in exploring the goodness and morality possible in individuals and suspicious of institutional establishments. Moreover, Whitman and other writers deeply valued the beauty, power, and divinity of nature during a time when industrial factories and waste

were polluting the landscape. Whitman revered the "mystical" quality and "perfect[ion]" of nature and treasured the peace and enlightenment it could bring individuals.



MORE RESOURCES

EXTERNAL RESOURCES

- [Whitman's Poem Read Aloud](#) – Listen to a reading of the poem aloud by astrophysicist Neil deGrasse Tyson. (https://www.youtube.com/watch?v=3r_HVGFI6fM)
- [Whitman's Poem and Astronomy](#) – Read about the poem in the context of astronomy and listen to astrophysicist Janna Levin read the poem aloud. (<https://www.brainpickings.org/2019/05/31/astrophysicist-janna-levin-reads-when-i-heard-the-learn-d-astronomer-walt-whitman/>)
- [Planetary Radio Discussion and Whitman's Poem](#) – Listen to a radio discussion where scientists discuss the poem from their perspectives, starting around 43:50. (<https://www.planetary.org/multimedia/planetary-radio/show/2019/0529-2019-jay-pasachoff.html>)
- ["When I Heard the Learn'd Astronomer" Christmas Carol](#) – Listen to the poem adapted as a Christmas carol. (<https://youtu.be/3E6OZMsovjs>)

- ["When I Heard the Learn'd Astronomer" Song Adaptation](#) – Listen to the poem adapted into a song. (<https://youtu.be/R-WniccZOBM>)

LITCHARTS ON OTHER WALT WHITMAN POEMS

- [A Noiseless Patient Spider](#)
- [I Hear America Singing](#)
- [O Captain! My Captain!](#)
- [The Voice of the Rain](#)



HOW TO CITE

MLA

Chen, Wendy. "When I Heard the Learn'd Astronomer." *LitCharts*. LitCharts LLC, 7 Jan 2020. Web. 22 Apr 2020.

CHICAGO MANUAL

Chen, Wendy. "When I Heard the Learn'd Astronomer." LitCharts LLC, January 7, 2020. Retrieved April 22, 2020. <https://www.litcharts.com/poetry/walt-whitman/when-i-heard-the-learn-d-astronomer>.