

# Did the Apollo astronauts retain their Hemingway-esque diction while walking on the moon?

PNIS Editorial Staff<sup>1</sup>

1 - PNIS

## INTRODUCTION

**E**rnest Hemingway's writing style is as famous as his novels. Literary critics have described his style as 1) simple, direct and linear ([Hayes 1966](#)), 2) clear, economical, and dispassionate ([Yanling 2013](#)), and 3) concise and precise ([Garrigues 2004](#)). His style is so infamous that it sparked an annual writing competition that sought to find the best Hemingway parody (the [International Imitation Hemingway Competition](#)). A computer program was created in 1994 that was easily able to discern Hemingway's prose from other authors ([Whissell 1994](#)). The author of the program noted that Hemingway used the "shortest sentences...and the shortest words". And in 2013, the [Hemingway App](#) was launched, which grades any text on its clarity and boldness. Adverbs and passive voice (like this sentence) are punished, while forceful verbs and shorter words are rewarded.

Direct, concise and precise are also words one would use to describe the dialogue of astronauts. This type of diction is entirely expected in a line of work where unclear, complicated dialogue may result in death (e.g., if the dialogue were instructions for repairing a spacesuit), especially when communication comes with a time delay. Thus, upon landing the lunar module on the moon, Neil Armstrong said, "The Eagle has landed" rather than, "Well, after years of planning and training, I, Neil Armstrong, would just like to confirm that our glorious spacecraft, of-

ficially known as the Lunar Module, yet affectionately known by us as "The Eagle", has indeed achieved one of the two possible fates that was set before it on this historic mission—those fates being either the total destruction of the Lander and those who reside within her, or the safe and unprecedented touchdown on another celestial body—and, yay, let it be known on this, the 20th of July, nineteen hundred and sixty-nine, a most glorious day, that our fate was indeed the latter and that we rest comfortably upon the bosom of the goddess Luna."

However, the very nature of being an astronaut involves experiences that few other people will have, such as flying in zero gravity, seeing the Earth from space, and walking on the goddamned moon. Surely, these experiences compel astronauts to wax poetically and deviate from their normal, Hemingway-esque banter, don't they? The goal of this paper is to analyze the words spoken by astronauts upon taking their first step on the moon to determine if they maintain their clear, direct dialogue while experiencing sights that are literally otherworldly, or if they allow themselves to go full Faulkner.

## METHODS

*Background* – Only 12 people that have ever lived in the history of the world have walked on the moon. All 12 were United States astronauts of the Apollo program. Each successful Apollo mission (11, 12, 14, 15, 16, 17) involved three astronauts, two of which walked on the moon (the third remained in an orbit-

ing command/service module). Most of the dialogue of these missions has been transcribed and is publicly available online from the amazing [Apollo Lunar Surface Journal](#). We obtained each astronaut's first lunar words from this resource.

*Literary metrics* – As mentioned above, the website [hemingwayapp.com](#) grades text on its similarity to Hemingway prose. A low grade indicates text that is most similar to Hemingway. As we mentioned above, the app looks at adverbs (less is better), word length (shorter is better), sentence length (shorter is better), and active/passive voice (active is better), among other characteristics.

We inserted the quotes of each moonwalker into this website and obtained the grade. The Hemingway App requires at least two sentences, so if a quote consisted of only one sentence, we simply repeated it

(from what we can tell, repeating a sentence does not alter its grade).

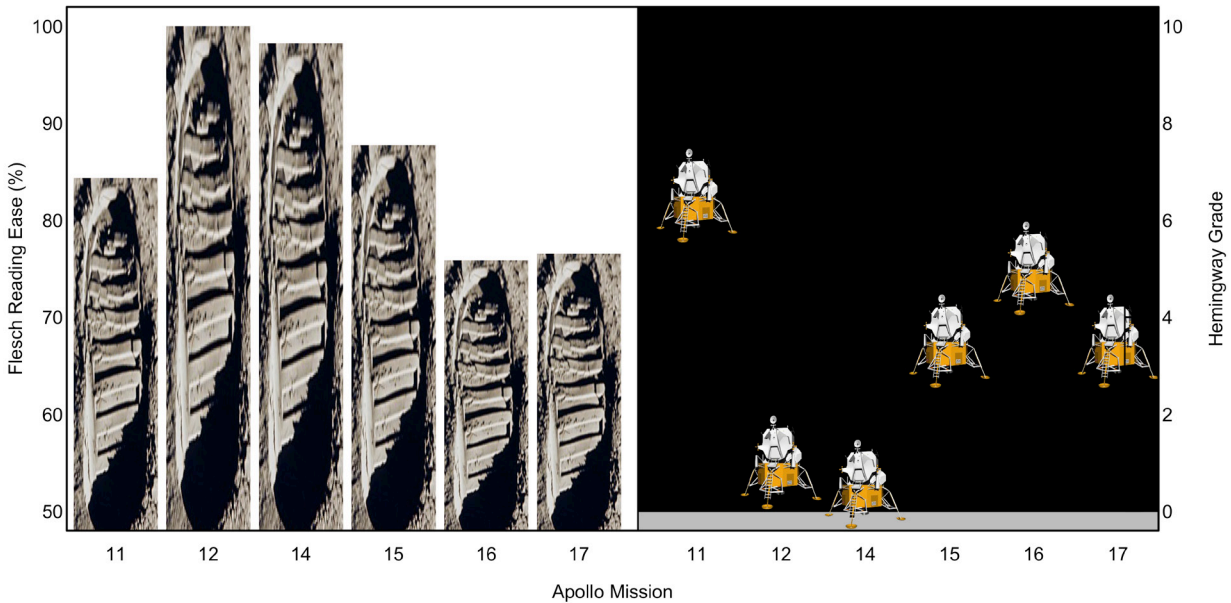
We also obtained the Flesch Reading Ease % for each quote by pasting each quote into Microsoft Word and running the Spelling and Grammar tool. The Flesch Reading Ease % analyzes the number of words and syllables in a sentence. Higher numbers indicate that the text is easier to read (Kincaid et al. 1975).

## RESULTS AND DISCUSSION

The quotes of each astronaut, their Hemingway grade, and their Flesch Reading Ease % are presented in Table 1. We also present these results graphically in Fig. 1 (note that we graph the *average* Flesch Reading Ease % and Hemingway Grade for each Apollo Mission).

**Table 1.** Quotes of the Apollo astronauts upon first setting foot upon the Moon, with corresponding Hemingway Grade and Flesch Reading Ease %.

Mission #	Astronaut	Quote	Hemingway Grade	Flesch Reading Ease %
11	Neil Armstrong	That's one small step for man, one giant leap for mankind.	5	95.6%
11	Buzz Aldrin	Looks like the secondary strut had a little thermal effects on it right here, Neil.	8	73.1%
12	Pete Conrad	Whoopie! Man, that may have been a small one for Neil, but that's a long one for me.	1	100%
12	Alan Bean	Okay. My, that Sun is bright.	0	100%
14	Alan Shepard	Okay, you're right. Al is on the surface. And it's been a long way, but we're here.	0	96.5%
14	Edgar Mitchell	That last one is a long one.	0	100%
15	David Scott	Okay, Houston. As I stand out here in the wonders of the unknown at Hadley, I sort of realize there's a fundamental truth to our nature. Man must explore. And this is exploration as its greatest.	4	75.5%
15	James Irwin	Boy, that front pad is really loose, isn't it?	3	100%
16	John W. Young	There you are: mysterious and unknown Descartes. Highland Plains. Apollo 16 is gonna change your image. I'm sure glad they got ol' Brer Rabbit, back in the briar patch where he belongs	6	77.9%
16	Charles Duke	Fantastic! Oh, that first foot on the lunar surface is super, Tony!	4	73.8%
17	Eugene Cernan	Jack, I'm out here. Oh, my golly! Unbelievable! Unbelievable; but is it bright in the Sun.	3	71.3%
17	Harrison "Jack" Schmitt	Why don't you come over here and let me deploy your antenna?	4	81.8%



**Figure 1.** Visualization of the Flesch Reading Ease % and Hemingway Grade of each Apollo Mission. Higher Flesch Reading Ease % and lower Hemingway Grade indicate clear and precise writing.

In general, astronauts were able to maintain a Hemingway-esque speaking style while experiencing their first lunar step. No astronaut scored above a 10 for the Hemingway Grade (anything above 10 indicates a style that deviates from Hemingway), and, in fact, three astronauts scored a perfect zero: Alan Bean, Alan Shepard, and Edgar Mitchell. Buzz Aldrin deviated the most from Hemingway, mostly because he used a very non-concise 15 words in his one sentence (the highest words per sentence of all the moonwalkers. If Buzz had added a “Whoopie!” his grade would have dropped to a 5). John W. Young had the second highest Hemingway Grade, mostly because he was rambling on about rabbits and briar patches. And Harrison “Jack” Schmitt scored the highest for the most unintentionally comedic lunar quote.

There doesn’t seem to be any strong temporal trends. After Apollo 11’s complete disregard in mimicking Hemingway, Missions 12 and 14 kept it much simpler and clearer (most likely on orders from the government. Conspiracy!). However, the Hemingway score increased with the remaining three missions.

<sup>1</sup> Actually, it’s quite the opposite. [Pete Conrad had bet a reporter that he would say his exact first words on the moon](#), after that reporter had claimed the government told Neil Armstrong what to say during his first steps on the moon.

## CONCLUSIONS

Most astronaut-speak is probably highly controlled and regulated, developed over many hours of training and simulations. Their lives depend on such clear and precise communication. Thus, it’s probably not all that surprising that even in situations of levity, when they are allowed to deviate from the script, their language still retains characteristics reminiscent of a typical Hemingway novel. Actually, it’s amazing that they’re even able to function at all while stepping in the moon dust and staring at the big, blue Earth. We can surely say that if it were one of us taking those steps, the quote would be something quite different. Possibly something like, “Holy shit, I’m on the moon. And I need a new spacesuit.”