

Quantum Tales

by Spencer Churchill

General metrics

24,917	4,120	305	16 min 28 sec	31 min 41 sec
characters	words	sentences	reading time	speaking time

Score

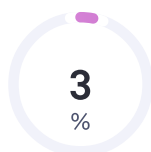


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Writing Issues

117	10	107
Issues left	Critical	Advanced

Plagiarism



9
sources

3% of your text matches 9 sources on the web or in archives of academic publications

Writing Issues

48

Clarity

8

Hard-to-read text



13

Passive voice misuse



8

Unclear sentences



17

Wordy sentences



2

Intricate text



11

Correctness

3

Comma misuse within clauses



1

Faulty subject-verb agreement



1

Wrong or missing prepositions



1

Misspelled words



1

Determiner use (a/an/the/this, etc.)



1

Incomplete sentences



1

Confused words



1

Pronoun use



1

Commonly confused words



13

Engagement

12

Word choice



1

Monotonous sentences



45

Delivery

45

Inappropriate colloquialisms



Unique Words

Measures vocabulary diversity by calculating the percentage of words used only once in your document

30%unique words

Rare Words

Measures depth of vocabulary by identifying words that are not among the 5,000 most common English words.

48%rare words

Word Length

Measures average word length

4.8characters per word

Sentence Length

Measures average sentence length

13.5words per sentence

Quantum Tales

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Spencer Churchill

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120 Quantum Tales is a work of fiction. Names, characters, places, events, locales, and incidents are the products of the author's imagination, or are used²³
fictitiously.⁴ Any resemblance to actual events, locales, or persons, living or dead, is entirely coincidental.

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Introduction

Fairy Tales

Quantum Tales borrows fables from around the world to excite and educate readers about quantum algorithms. There are four popular fairy tales from England to China, and they all illustrate different applications for quantum computing.

- * The Cowherd and the Weaver Girl (牛郎织女) is the Chinese Valentine's day story that was modified to teach Quantum Teleportation.
- * Goldilocks and the Three Bears ⁵comes from ⁶England, and is the most fitting story to teach the Deutsch-Jozsa algorithm.
- * Ali Baba and the Forty Thieves (علي بابا والأربعون لصا), a traditional Arabian oral story, perfectly demonstrates the power of Shor's algorithm.
- * The Tortoise and the Hare (Ο λαγός και η χελώνα), originating from ancient Greece, is revitalized in a rematch using Grover's algorithm.

Quantum Algorithms

- * Quantum Teleportation
 - * This algorithm is used as an example of sending quantum information by classical means.
- * The Deutsch-Jozsa Algorithm
 - * This algorithm determines if a function is constant or balanced, meaning it returns either the same value (0 or 1) or both evenly (0 and 1).
- * Shor's Algorithm
 - * This algorithm calculates the periodicity of a function. The application is ⁷often attributed to prime factorization.
- * Grover's Algorithm
 - * This algorithm searches for an item in an unordered list.

QR Codes

There is a QR code in each story to allow for a deep-dive into the content. The QR codes ⁸are presented when the protagonist ⁹is implementing the quantum algorithm, and they give a more involved experience. Readers with experience in quantum computing should scan the QR codes and ¹⁰be redirected to the GitHub repository. Clicking the Google Colab link will run the ¹¹code in the browser; the jupyter notebook can also ¹²be viewed in the repository.

Ways of Reading

¹³For readers looking for an enjoyable twist on classic fairy tales, simply reading the stories is more than enough; however, for curious readers, scan the QR codes, and look at the code, variable names, and outputs. ¹⁴Also, browse the citations for great quantum resources. ¹⁵For advanced quantum readers, please check out the code and submit a pull request if anything could be improved.

The Entangled Love of the Cowherd and Weaver Girl

As the first peonies broke into bloom, the seven imperial daughters of Heaven, with clouds tracing their steps, descended from their jade palace to bathe in the clear lake. While they soaked, a breeze lifted the dress of Zhīnǚ, the youngest sister, off a branch into the water. Her sisters laughed as they put on their dry clothing and returned to Heaven.

Watering his oxen at the lake, the cowherd Niúláng spied Zhīnǚ sitting along the bank. Hastily, he took off his tunic and covered the young lady. She explained to him that her clothes were wet from blowing into the lake and Niúláng, charmed by Zhīnǚ, offered to show her the area while her dress dried. Niúláng led Zhīnǚ up a nearby hill that overlooked the water and surrounding countryside. He explained that he came here to graze his oxen and watch the colorful clouds overhead. Niúláng continued describing the beautiful hues of these clouds, oblivious to why Zhīnǚ was blushing, ¹⁶ but she soon revealed that it was she who weaves the clouds in Heaven.

To Niúláng, the clouds were just shadows of Zhīnǚ's beauty; he would rather see empty skies than not be with her. Returning to the lake, Niúláng playfully tossed Zhīnǚ's clothes back into the water and asked her to stay with him until her clothing dried. Her cheeks grew pink as she smiled and nodded.

The two grew closer, finding themselves lost in love. Zhīnǚ hardly thought of the ¹²¹ | jade palace. As their love grew, so did their family, and Zhīnǚ and Niúláng began sharing their tranquil life with two children. All this time, Zhīnǚ's heavenly dress rested along the lake bed.

Zhīnǚ's mother and Empress of Heaven, Xīwángmǔ, was bothered by a suspicious absence of new clouds. After questioning six of her daughters, she discovered that Zhīnǚ had betrayed Heaven and married a mortal. Driven to rage by her youngest daughter's foolishness, Xīwángmǔ dragged the unwilling princess back to her heavenly palace.

Niúláng, distraught from the loss of his beloved, ran to the lake. Clutching his wife's sodden dress, he cursed the heavens for stealing her. ¹⁷ And a response came, not from the sky, but from Niúláng's most prized ox that had sipped from the ¹⁸ heavenly water.

The ox told Niúláng that if he wore its hide as a cloak, he could ascend to Heaven and find his wife. With a heavy heart, Niúláng killed the ox, covered his shoulders with its skin, and climbed toward the heavens with his children.¹⁹

Zhīnǚ was overjoyed to be reunited with Niúláng, but she knew her mother well and what was to come. She warned Niúláng that the arrival of a mortal and two half-celestials in Heaven would infuriate her mother, who would separate them again.

As Zhīnǚ prepared for their inevitable separation, she remembered what Yùhuáng, her father and Emperor of Heaven, had taught her.

As all good rulers know, effective communication is key to maintaining power, and Yùhuáng had devised the best method in the universe. He referred to this method as Quantum Teleportation, a secure way to encode and communicate information across the heavens at the speed of light.

Niúláng closely listened as Zhīnǚ imparted her father's method of communication. Using starlight, they could connect particles and send messages to each other, despite whatever Xīwángmǔ may try.

Zhīnǚ demonstrated the process. She unclasped one of her crystal earrings and held it high, splitting a beam of starlight into two photons. This pair, born from the same beam, was tightly related and entangled. If either photon in this entangled pair were changed, even slightly, its twin would reflect this change. Zhīnǚ stored one photon for her and the other for Niúláng.

She handed Niúláng her other earring, and they worked together, entangling enough particles to communicate for an entire year, all organized by pairs. Alas, Xīwángmǔ spotted Niúláng with Zhīnǚ in Heaven. Enraged once more, Xīwángmǔ drew her jade hairpin, and as her hair tumbled around her feet, slashed a river between the couple, forming the Milky Way.

This heavenly river swept the two lovers apart. ²⁰But, with their entangled particles, they sent messages back and forth throughout the year. ²¹And though Xīwángmǔ tried her hardest, she could never read the couple's messages. The magpies, curious upon finding a new river of stars in the sky, flew up to ask Zhīnǚ what had happened. She explained what her mother had done and that she and Niúláng needed a way to entangle more particles each year. ²²The magpies considered this, and on the seventh night of the seventh moon, flew to Heaven to temporarily form a bridge across the Milky Way for the two lovers. Even now, despite her mother's interference, Zhīnǚ and Niúláng continue entangling particles each year and sharing their love across the universe.

Goldilocks and the Quantum Spoon

Between a quiet town and a dark forest, there was a vast field of wildflowers. Picking her way through the meadow was a girl with golden hair. As she walked, she hummed and searched for perfect flowers. ²³You ²⁴see, this girl was Goldilocks, and she needed everything to be just right. She searched and searched, but few flowers struck her fancy: some stems ²⁵were bent, some petals had brown tips, and some still had bees buzzing and bumbling about, so she ventured deeper into the forest. Goldilocks knelt over a delicate flower and pulled back a petal. "Is there a bee, or not a bee? That is the question." She mused. Goldilocks picked her last flower and finally held the most beautiful bouquet of honeysuckles and merrybells. ²⁶But the surrounding trees had blocked out the sun, and she lost track of time between their shadowed trunks. So much time, ²⁷in fact, that she found herself quite peckish.

As one often does, she spied a humble cottage in a clearing deep in the woods. The cottage looked cozy, and ²⁸tempting scents wafted toward her.

Goldilocks knew the smell of home-cooked porridge, but she did not know that the house belonged to three bears. Luckily for Goldilocks, the three bears had sauntered into the forest to work up an appetite ²⁹while they waited for their dinner to cool down.

Goldilocks knocked, waited, then knocked again. There was no response. The smells of freshly-made supper filled the porch, and, finding the door was unlocked, she could not help but peek inside.

From between the dark-oak frame, she spotted a table set for three and one quantum computer. She hoisted herself into the largest chair, but the cushion was too deep, and her feet dangled awkwardly. The smallest chair was much too tight, so she relaxed into the middling chair, and it felt just right. There she waited patiently, sniffing at the bowls of porridge.

She waited and waited, but nobody came. “They must be very slow,” she thought. “Their porridge will go cold before they come home!” So she scooted closer to the table.

There were three wooden bowls: one large, one middling, and one small, all filled with porridge. Goldilocks reached for a spoon, then hesitated. “Which porridge to try?” She pondered. Too cold would be stodgy and unpalatable; too hot might burn her tongue.

Goldilocks ³⁰was experienced with flowers and porridge, but she was also well-versed in quantum algorithms. The key was to consider each bowl as either completely hot or completely ³¹cold, or an equal blend of hot and cold porridge. By doing so, she could apply the Deutsch-Jozsa algorithm.

This algorithm instantly reveals whether a bowl is constant or balanced. A constant bowl of porridge is always hot or always cold. A balanced bowl is a mix of hot and cold porridge.

Now instead³² of having the misfortune of burning her tongue, she used the computer to test the bowls. The large and small bowls were both constant and therefore either too hot or too cold. The middling bowl was balanced, and thus, she knew it was just the right blend of hot and cold porridge.

She savored her success at finding the finest³³ porridge and continued to savor taste after taste until the bowl was all tasted. But³⁴ this tasting had made Goldilocks very sleepy, and she went to an adjacent room to rest. She suspiciously eyed the large and small beds, but from³⁵ her experience with the chairs and porridge, she decidedly settled into the middling bed.

Contemplating more uses for quantum algorithms, she fell fast asleep.

But³⁶ while Goldilocks was sleeping, the three bears returned and sensed something was amiss. The smallest bear noticed his empty bowl and growled loudly, for he was very hungry³⁷.

Goldilocks awoke to this low growl. She peeked out and saw three brown bears! The bears were approaching where she hid, following the sweet scent of the bouquet. Quickly, Goldilocks threw the flowers away from her and dashed to the open window.

The honeysuckles distracted the bears, and Goldilocks leaped from the window into the clearing.

The bears saw Goldilocks running toward the trees, but Goldilocks was³⁸ refreshed, having eaten and slept, while the bears were tired from their ambling. The middling bear, his tummy grumbling, sadly watched the thief escape into the forest while³⁹ the other two bears happily began slurping up their porridge.

Ali Baba and the RSA Keys

A wealthy merchant fathered two sons, Ali Baba and Cassim. Cassim prided himself on living comfortably, having acquired⁴⁰ his father's business and marrying solely for further wealth. Ali Baba, on the other hand, welcomed a more humble lifestyle — becoming a woodcutter and marrying the woman he loved.

While chopping wood one day, Ali Baba heard heavy footsteps approaching. From behind a large juniper tree, he spied forty thieves laden with treasure. As he watched, the leader of the thieves, called Lot, approached a sheer mountain face in the distance, whispered to it, and stood back as a cave magically opened up in the rock. One by one, Lot's thieves entered with their gold, and the cave closed behind them. Sometime later, the cave opened to let out the now empty-handed thieves, closing behind them once more.

After the thieves had vanished, Ali Baba approached the face of the cliff himself and noticed a series of jumbled letters carved into the rock. He whispered them to the mountain, curious if they would open the cave, but alas, they did not. He transcribed the letters from the rock to a roll of papyrus and returned home.

Once there, Ali Baba found Cassim anxiously pacing and clenching his fists. He asked him what was wrong, and Cassim explained that a fellow trader had just been killed⁴¹ in a nearby town. Their entire caravan had been looted and destroyed, and the thieves had left only an unintelligible note behind.

Curious, Ali Baba asked to see the note and was shocked when he saw letters as jumbled as those etched into the mountain face. In addition⁴², he spotted a

small number scribbled on the corner of the note.

He remembered hearing stories from a trader about a band of thieves who communicated using secret messages. As they had grown prosperous and powerful, the group realized they required communications that could not be compromised. Messages that, even if viewed in broad daylight, would appear only as scrambled letters.

The trader had explained that these innovative thieves began using a cipher known as RSA to encrypt their secret messages. The cipher would scramble messages with a public key and unscramble messages with a private key. Only with the private key was the message able to be read. Thus, the leader of the⁴³ thieves could receive reports from his members, employ spies, and monitor his thieving throng while remaining safe from prying eyes. The RSA cipher had helped them become very⁴⁴ successful and wealthy.

Around the same time, Ali Baba's father had received a device that drew on the nature of atoms for computation. This mysterious computer could uncover the patterns of functions to factor numbers, a process referred to as Shor's algorithm.

The number to be factored appeared⁴⁵ on the corner of the note. This number was called the modulus, the product of two prime numbers. These numbers were also used⁴⁶ to create the public and private keys. If Ali Baba could find the two prime numbers that produce the number on the note⁴⁷, he could then easily⁴⁸ generate the private key and read the secret message.

With his plan in place, Ali Baba began with his quantum computer. The fastest way to factor numbers was by means of⁴⁹ Shor's algorithm, and there was not a moment to spare.

It was late at night when Ali Baba finally finished applying Shor's algorithm, but ⁵⁰ he had succeeded in factoring the number and generating the thieves' private key. With this key, he decrypted the message in the rock, and it read "Open sesame."⁵¹

The next morning, Ali Baba hastened to the mountain, whispered "Open sesame," and watched as the cave magically opened. Not wishing to leave any sign of his entry, he rushed in and collected only a single sack of gold. Ali Baba returned home to show his wife the gold, and she burst into tears of joy. She hurried to Cassim and asked for a scale. Curious about what his poor brother could possibly⁵² need to weigh, Cassim secretly applied wax to the inside of the scale.

After weighing the gold, the wife returned the scale, and when Cassim discovered a piece of gold stuck to the wax, he became envious. "Ali Baba has so much gold he can't⁵³ count it! He needs to weigh it all!" he cried.

Driven by suspicion, Cassim decided to follow his brother. When Ali Baba left home the next morning to chop wood, Cassim watched from a safe distance. After several hours, he saw Ali Baba approach a cliff and enter a cave through a magical opening — a cave he could see was filled with treasure. Ali Baba quickly emerged with a bag of gold, the cave sealing itself once again behind him. Cassim, overwhelmed with envy of Ali Baba's gold, vowed to return and empty the magic cave of all its treasure.

At home that night, Cassim strapped great chests to all his mules. He led the caravan toward the cliff, but the entrance would not open when he approached. For hours Cassim scratched and smacked the rock in frustration, so distracted that he did not notice the forty thieves approaching in silence. Turning at one point to catch his breath, Cassim was greeted⁵⁴ with dozens of raised scimitars.

Lot emerged from his horde. “What have we here?” he asked as his thumb grazed the edge of his scimitar. Cassim’s eyes bulged. “Look, habibi,⁵⁵ I appreciate a good theft as much as any other, but this is our secret cave, and now it’s⁵⁶ not so secret, is it?” Lot⁵⁷ now toyed with the hilt of his scimitar. Cassim quickly tried to expose Ali Baba, but Lot’s scimitar was quicker.⁵⁸

After a few weeks, Ali Baba mentioned to Cassim’s wife that he had not seen his brother in⁵⁹ many days. She explained that he had left weeks ago with his mules but had not returned. After months with no sign of Cassim, the two correctly guessed that the group of bandits had dispatched Cassim and his caravan. Ali Baba swore to avenge his brother and continued to secretly loot the cave. He quietly invested his newfound wealth back into the town, in particular⁶⁰ the funding of a new school. There, he taught quantum computation and assured his students that quantum algorithms could prove quite useful.

Tortoise vs. Hare — Quantum Rematch

The wind rushed through his golden fur. The ground shook with his every leap. With ears slicked back, the Hare bolted across the hills. Several animals glanced up as he thundered by. Breaking the beat of the Hare’s pounding feet, the Weasel jeered, “Slowpoke!”

The Hare swiveled, skidding to a halt. “Who said that? Answer!” He thumped angrily as the animals howled with laughter. This⁶¹ was the last straw.

“For over two thousand years,” the Hare began, “I have endured your jibes. Well, that ends now!” His tail bristled. “I am the most agile, quick, dashing animal, and I will redeem all harekind.” His roving eyes narrowed as they settled on the dozing Tortoise.

After his humiliating defeat by the Tortoise millennia ago, the Hare had trained relentlessly. Despite all his displays of speed, however, the other animals ⁶²constantly reminded him of his loss.

The Tortoise, on the other hand, had spent his days resting under an olive tree, contemplating the world. Quite the philosopher, he was currently immersed in the study of quantum mechanics.

“There is no way you can ⁶³best me,” the Hare huffed. “We will race again, and I will win.” The Tortoise slowly blinked. The Hare’s eye twitched.

Early the next morning, the Tortoise and the Hare both awoke to prepare for their rematch. The Hare tore across the old trail, over and over, always improving his time. When the Hare looked to see how his rival was preparing, he saw, what he thought, was the Tortoise wandering ⁶⁴aimlessly. Little did he know, the Tortoise was recording the distances of every possible path.

A few days went by, and at last, it was time for the big race. The Fox marked the destination as he had long ago. ⁶⁵And with a wave of his flag, the Tortoise and the Hare started ⁶⁶off.

The Hare bounded and zig-zagged through bushes and shrubs at an astonishing speed. Occasionally, he would pause and stretch, looking behind with a smirk. Not seeing the Tortoise, the Hare scratched his ears, fluffed his tail, and dashed over the game trail toward the finish line. ⁶⁷This was the best he had felt in years.

Meanwhile, the Tortoise shuffled to his nearby quantum computer and withdrew the long list of routes. There were far too many to search through, so he opted to use Grover’s algorithm ⁶⁸because it highlights the target while minimizing the others. What ⁶⁹normally might take one hundred guesses would only take ten with a quantum computer.

In the blink of an eye, the Tortoise's computer found the shortest path, and he headed off in a direction different than the Hare's.

Instead of following the worn path, the Tortoise kept to the path that Grover's algorithm outlined, avoiding the bushes and shrubs and ⁷⁰greatly reducing the distance. The Tortoise slowly, but directly, made his way toward the finish line. On a nearby hill, the Hare looked behind himself, squinting against the sun, trying to spot the Tortoise. "Typical," he thought. "The Tortoise is even slower than last time."

The Hare turned to finish the race. Much to his despair, he saw, just a few steps from the finish line, the Tortoise trudging forward.⁷¹

"How can this be?" The Hare exclaimed. He charged toward the finish line but could not overtake the Tortoise in time.

The Tortoise winked at the panting Hare and said, "It's the shortest path that wins the race."⁷²

Acknowledgments

¹²³ I need to begin by thanking my family and friends for reading the stories and listening to me during the process.^{73 74 75 76 77,78 79} I'm sure that they'd prefer to do anything than to hear me decide between "find," "determine," and "reveal," but their consistent support helped me finish this project.^{80,81 82}

¹²⁴ I am so fortunate to have such a talented artist help tell my stories.^{83 84} Larissa's illustrations re-inspired me countless times when I was in the midst of writer's block. I can't imagine being asked to illustrate a fairy tale book and then get quantum computers thrown at me, but she did a wonderful job researching and bringing my vision to life.^{85 86 87 88 89 90 91 92 93}

For the quantum community that welcomed me,⁹⁴ gave invaluable feedback, and kept me excited about quantum,⁹⁵ I thank you all.^{96 97} To everyone in the Qiskit

community, thank ⁹⁸you, and especially for ⁹⁹your votes for the most ¹⁰⁰interesting quantum algorithms that directly shaped this book.

For the first reason there exists any book at all, I'd love to extend a thank you to ^{101,102}the original story-tellers who created these fairy tales. ¹⁰³Our world is a much ¹⁰⁴richer place because these stories exist. ¹⁰⁵I am so grateful that ¹⁰⁶they've been ¹⁰⁷preserved and can now ¹⁰⁸be shared with a new purpose.

The other reason ¹⁰⁹I'm able to publish this book is due to the tremendous support from the Unitary Fund. ¹¹⁰I came to them with an idea to introduce quantum algorithms through stories, and they have helped ¹¹¹me ¹¹²along the way since. Their fund is founded on open-source ideologies and hopes to bring quantum to ¹¹³everyone. It has been an absolute pleasure to work with the Unitary Fund. ¹¹⁴I specifically want to thank Travis Scholten for pushing ¹¹⁵my ¹¹⁶project to receive ¹¹⁷funding. ¹¹⁸I would also like to thank Nathan Shammah and William Zeng for ¹¹⁹helping me narrow ¹²⁰my focus and providing countless resources to get these stories prepared for publication.

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1.	<i>No part of this publication may be reproduced, or stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission of the publisher.</i>	Hard-to-read text	Clarity
2.	imagination,	Comma misuse within clauses	Correctness
3.	<i>are used</i>	Passive voice misuse	Clarity
4.	<i>Names, characters, places, events, locales, and incidents are the products of the author's imagination, or are used fictitiously.</i>	Unclear sentences	Clarity
5.	comes → come	Faulty subject-verb agreement	Correctness
6.	England,	Comma misuse within clauses	Correctness
7.	<i>is often attributed</i>	Passive voice misuse	Clarity
8.	<i>are presented</i>	Passive voice misuse	Clarity
9.	is implementing → implements	Wordy sentences	Clarity
10.	<i>be redirected</i>	Passive voice misuse	Clarity
11.	browser code	Wordy sentences	Clarity
12.	<i>be viewed</i>	Passive voice misuse	Clarity
13.	simply → merely	Word choice	Engagement
14.	<i>For readers looking for an enjoyable twist on classic fairy tales, simply reading the stories is more than enough; however, for curious readers, scan the QR codes, and look at the code, variable names, and outputs.</i>	Hard-to-read text	Clarity

15.	<i>For advanced quantum readers, please check out the code and submit a pull request if anything could be improved.</i>	Unclear sentences	Clarity
16.	, but she → . However, she	Hard-to-read text	Clarity
17.	And → Moreover,, Furthermore,	Inappropriate colloquialisms	Delivery
18.	heavenly → holy	Word choice	Engagement
19.	<i>With a heavy heart, Niúláng killed the ox, covered his shoulders with its skin, and climbed toward the heavens with his children.</i>	Unclear sentences	Clarity
20.	But → However, Nevertheless	Inappropriate colloquialisms	Delivery
21.	And → Moreover,, Furthermore,	Inappropriate colloquialisms	Delivery
22.	<i>The magpies considered this, and on the seventh night of the seventh moon, flew to Heaven to temporarily form a bridge across the Milky Way for the two lovers.</i>	Unclear sentences	Clarity
23.	<i>Between a quiet town and a dark forest, there was a vast field of wildflowers. Picking her way through the meadow was a girl with golden hair. As she walked, she hummed and searched for perfect flowers.</i>	Monotonous sentences	Engagement
24.	You	Inappropriate colloquialisms	Delivery
25.	were bent	Passive voice misuse	Clarity
26.	But → However,, Nevertheless,	Inappropriate colloquialisms	Delivery
27.	, in fact,	Wordy sentences	Clarity
28.	tempting → pleasing, captivating	Word choice	Engagement
29.	while → . At the same time,	Hard-to-read text	Clarity

30.	<i>was experienced</i>	Passive voice misuse	Clarity
31.	cold,	Comma misuse within clauses	Correctness
32.	Now instead → <i>Instead</i>	Wordy sentences	Clarity
33.	finest → <i>most OK</i>	Word choice	Engagement
34.	But → <i>However,, Nevertheless,</i>	Inappropriate colloquialisms	Delivery
35.	, but from → <i>. However, from</i>	Hard-to-read text	Clarity
36.	But → <i>However,, Nevertheless,</i>	Inappropriate colloquialisms	Delivery
37.	very hungry → <i>starving, famished, ravenous</i>	Word choice	Engagement
38.	<i>was refreshed</i>	Passive voice misuse	Clarity
39.	while → <i>. In contrast,</i>	Hard-to-read text	Clarity
40.	having acquired → <i>acquiring</i>	Wordy sentences	Clarity
41.	<i>been killed</i>	Passive voice misuse	Clarity
42.	In addition → <i>Also, Besides</i>	Wordy sentences	Clarity
43.	<i>thieves' leader</i>	Wordy sentences	Clarity
44.	very → <i>wildly</i>	Word choice	Engagement
45.	<i>in appeared</i>	Wrong or missing prepositions	Correctness
46.	<i>were also used</i>	Passive voice misuse	Clarity
47.	<i>note's number</i>	Wordy sentences	Clarity
48.	easily → <i>quickly</i>	Word choice	Engagement
49.	by means of →	Wordy sentences	Clarity

	using, utilizing, employing, through		
50.	, but he → . However, he	Hard-to-read text	Clarity
51.	<i>With this key, he decrypted the message in the rock, and it read "Open sesame."</i>	Unclear sentences	Clarity
52.	possibly	Wordy sentences	Clarity
53.	can't → cannot	Inappropriate colloquialisms	Delivery
54.	<i>was greeted</i>	Passive voice misuse	Clarity
55.	habibi → Habibi	Misspelled words	Correctness
56.	it's → it is	Inappropriate colloquialisms	Delivery
57.	A lot, or The lot	Determiner use (a/an/the/this, etc.)	Correctness
58.	<i>quicker</i>	Incomplete sentences	Correctness
59.	in	Wordy sentences	Clarity
60.	in particular → particularly	Wordy sentences	Clarity
61.	<i>This</i>	Intricate text	Clarity
62.	eonstantly → always	Word choice	Engagement
63.	best → beat	Confused words	Correctness
64.	aimlessly	Wordy sentences	Clarity
65.	And → Moreover,, Furthermore,	Inappropriate colloquialisms	Delivery
66.	off	Wordy sentences	Clarity
67.	<i>This</i>	Intricate text	Clarity
68.	to highlight	Wordy sentences	Clarity

69.	normally → usually	Word choice	Engagement
70.	greatly → significantly	Word choice	Engagement
71.	<i>Much to his despair, he saw, just a few steps from the finish line, the Tortoise trudging forward.</i>	Unclear sentences	Clarity
72.	He → It is	Inappropriate colloquialisms	Delivery
73.	I	Inappropriate colloquialisms	Delivery
74.	my	Inappropriate colloquialisms	Delivery
75.	me	Inappropriate colloquialisms	Delivery
76.	<i>I need to begin by thanking my family and friends for reading the stories and listening to me during the process.</i>	Unclear sentences	Clarity
77.	I'm → I am	Inappropriate colloquialisms	Delivery
78.	I'm	Inappropriate colloquialisms	Delivery
79.	they'd → they would	Inappropriate colloquialisms	Delivery
80.	other than	Pronoun use	Correctness
81.	than → then	Commonly confused words	Correctness
82.	me	Inappropriate colloquialisms	Delivery
83.	I	Inappropriate colloquialisms	Delivery
84.	my	Inappropriate colloquialisms	Delivery
85.	me	Inappropriate colloquialisms	Delivery
86.	I	Inappropriate colloquialisms	Delivery
87.	I	Inappropriate colloquialisms	Delivery

88.	can't → cannot	Inappropriate colloquialisms	Delivery
89.	<i>being asked</i>	Passive voice misuse	Clarity
90.	<i>me</i>	Inappropriate colloquialisms	Delivery
91.	, but she → . However, she	Hard-to-read text	Clarity
92.	a wonderful → an excellent, a fantastic	Word choice	Engagement
93.	<i>my</i>	Inappropriate colloquialisms	Delivery
94.	<i>me</i>	Inappropriate colloquialisms	Delivery
95.	<i>me</i>	Inappropriate colloquialisms	Delivery
96.	<i>I</i>	Inappropriate colloquialisms	Delivery
97.	<i>you</i>	Inappropriate colloquialisms	Delivery
98.	<i>you</i>	Inappropriate colloquialisms	Delivery
99.	<i>your</i>	Inappropriate colloquialisms	Delivery
100.	interesting → exciting	Word choice	Engagement
101.	I'd → I would	Inappropriate colloquialisms	Delivery
102.	<i>I'd</i>	Inappropriate colloquialisms	Delivery
103.	<i>you</i>	Inappropriate colloquialisms	Delivery
104.	<i>For the first reason there exists any book at all, I'd love to extend a thank you to the original story-tellers who created these fairy tales.</i>	Unclear sentences	Clarity
105.	<i>I</i>	Inappropriate colloquialisms	Delivery
106.	they've → they have	Inappropriate colloquialisms	Delivery

107.	<i>be shared</i>	Passive voice misuse	Clarity
108.	I'm → I am	Inappropriate colloquialisms	Delivery
109.	I	Inappropriate colloquialisms	Delivery
110.	me	Inappropriate colloquialisms	Delivery
111.	along the way	Wordy sentences	Clarity
112.	I	Inappropriate colloquialisms	Delivery
113.	my	Inappropriate colloquialisms	Delivery
114.	I	Inappropriate colloquialisms	Delivery
115.	me	Inappropriate colloquialisms	Delivery
116.	helping me narrow → narrowing	Wordy sentences	Clarity
117.	my	Inappropriate colloquialisms	Delivery
118.	<i>All rights reserved. No part of this publication may be reproduced,</i>	in any form or by any means, electronic, mechanical ... http://hdr.undp.org/sites/default/files/lesothonhdr2006.pdf	Originality
119.	<i>stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying,</i>	in any form or by any means, electronic, mechanical ... http://hdr.undp.org/sites/default/files/lesothonhdr2006.pdf	Originality
120.	<i>and incidents are the products of the author's imagination, or are used fictitiously. Any resemblance to actual events, locales, or persons, living or dead, is entirely coincidental.</i>	How to Avoid Legal Issues when Writing About Real People https://www.wikihow.com/Avoid-Legal-Issues-when-Writing-About-Real-People	Originality
121.	<i>As their love grew, so did their family,</i>	John Pugh Obituary (1956 - 2020) - The Daily Herald	Originality

		https://www.legacy.com/obituaries/columbiadailyherald/obituary.aspx?pid=197271027	
122.	<i>across the heavens at the speed of light.</i>	THE SECRET BEHIND STAR WARS - The New York Times https://www.nytimes.com/1985/08/11/magazine/the-secret-behind-star-wars.html	Originality
123.	<i>I need to begin by thanking my family and friends for</i>	Maricopa County Jail Stories: Welcome To Experience of ... https://ldsbiker.blogspot.com/2010/08/welcome-to-experience-of-estralla-jail.html	Originality
124.	<i>I am so fortunate to have such a</i>	I am so fortunate to have such a caring sensitive doctor ... https://www.mdvip.com/patients/member-testimonials/i-am-so-fortunate-have-such-caring-sensitive-doctor	Originality
125.	<i>Our world is a much richer place because</i>	How to Produce A Low Budget Short Movie - Sofy.tv - Blog https://sofy.tv/blog/low-budget-short-movie/	Originality
126.	<i>It has been an absolute pleasure to work with the</i>	United States : HFF announces senior financing for NEXT Apartments in Chicago	Originality