



ƒŷƑŔ ANOR ƒŷƑŔ

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*“Et Eärello Endoreenna utúlien. Sinomë maruvan ar  
Hildinyar tenn’ Ambar-metta.”*

## ***EDITORIAL***

*Arise, arise, Readers of Anor! Dire deeds awake; dark is it eastward.* And darker and darker it is getting in these eastern fens, as winter draws slowly on. So what better than an issue of Anor – like the Sun – to lighten our darkness?

For this is no ordinary Anor, but our 60<sup>th</sup> issue! I have taken this as an excuse to make it longer than usual, as the contents page attests.<sup>1</sup> Relive the Fellowship of the Ring (perhaps not *quite* as you remember it) in Samuel's thrilling retelling; explore the logistics of food, water and reproduction in Middle-earth; travel to Newbury for musical exploits, or to Orthanc for technological ones – the choice is yours.

Finally, it is my happy duty to announce the winner of the prize for guessing Anor 59's mystery poem! The poem was, of course, Aragorn's song of Beren and Lúthien rendered into Quenya, and the winner was Katrina Ng. Kudos to her, and to Will Irngartinger, who also guessed correctly.

Happy reading!

Daeron (Eleanor Smith)

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<sup>1</sup> Though the issues in which the remainder of 'The Alternative Lord of the Rings' and 'Adventures with GPT-4' are to appear will have no such excuse...

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# ***THE ALTERNATIVE LORD OF THE RINGS***

## **Part I: The Fellowship of the Ring**

### **Samuel Cook**

*Editor's note: For those who may not have run into Sam Cook's Summaries™ before, a brief explanation. Since Easter 2020, CTS has run a Tolkien read-along through our Discord server. While we were reading The Lord of the Rings, to encourage us onwards, Samuel took to providing a helpful summary of whatever we were about to encounter in our next reading session. These have been collected here for the first time in print: they can also be found on Samuel's blog at <https://aiyabelcarda.wordpress.com/2023/01/18/the-alternative-lord-of-the-rings/>. Two Towers, Return of the King, Hobbit and Silmarillion coming soon...*

Mad Baggins of Hobbiton gives a very much expected party. And sasses everyone.

The Shadow of the Past casts its darkling pall over Frodo's idyllic bachelor-lord-of-the-manor life. Also, Gandalf offers no real explanation for what he's been doing for 17 years.

Gandalf does more exposition and suggests the best way to save the world is to send chinless wonder Frodo tottering off into the Wild

with his batman who's never been more than 20 miles from Hobbiton.

Gandalf doubles down on his vague hunch to save the world by sending Bromance and Halfwit wombling off to Bree and completely leaving them in the lurch by doing something stupid like visiting Saruman-the-totally-not-evil.

The gay communards (Frobeau, Campwise (doing for his master) and Poppet (one of Frobeau's special friends)) set off on their journey to ostensibly set up their gay commune in the queer enclave of Buckland, aided by Frobeau's other special friend, Merry 'Mary' Brandybuck, and pursued by the Black Riders of conservative social reaction. Gandalf, meanwhile, working to secure legal recognition for the communards, is held up by a filibuster from Jacob Rees-Saruman.

Having been thoroughly patronised by Gildork the Inglorious, our heroes (Frou-frou, YumPies and Pipstick) find an unexpected ally in Farmer 'What Dangerous Dogs Act?' aka 'Second Amendment' aka 'Shoot to Kill' Magwitch. They all peace out on an astounding quantity of shrooms and hoodwink the pursuing cavalry officers of the Met with the old rope-ferry trick, assisted by the fourth member of the gang, DerryTheRock, enabling them to escape to set up the commune.

The gang (Frozzler, Shazzam and Pipster) aid local drug lord 'Farmer' Fagpot to smuggle a stash of high-quality shrooms across the border to the bohemian enclave of Buckland, helped by the fourth gang member, Mazzer, and pursued by the incompetent PC

Steve.<sup>2</sup> They then proceed to get utterly lit in celebration of their successful heist and party the night away.

The Frabjous Four (Frinky Dinky, Pipesey, Sasa, Mo) realise the heat is on after their shroom smuggling and jewellery theft, and they have to get out of the Shire and lie low for a bit. They go for a walk in the woods and, predictably, get lost and attacked by an evil tree (definitely not a side-effect of all the shrooms) as they make for the Free City of Bree. They encounter faded rockstar Tom Jonesadil, who wanders round belting out his hits and invites them back to his glamping pad where he lives with his much-younger wife who he just abducted one day in a way that totally requires NO POLICE ACTION.

The Fab Four (Forge, Saul, MeriaJohn and Pippo) get predictably lost and blunder into the Willow family's illegal singing operation in the forest. Fortunately, the Voice Squad's crack, if eccentric, operative Tom 'Bomber' Dill comes down on the operation like a ton of bricks and rescues them from Old Man Willow's clutches and takes them to the Voice Squad's safehouse staffed by an elite agent, codenamed 'Goldberry'. Whilst there, weird shit happens.

In celebration of the successful raid by the Voice Squad, the Famous Four (Frulian, Sanne, Mick and Porge) hotbox the safe house with Tom and Goldberry and hallucinate a lot of incredibly weird shit. To the point where Tom is totally unaffected by Frulian's Bore Ring, that turns anyone who wears it into a raging gammon bent on returning to an imaginary nostalgic past.

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<sup>2</sup> Ed. – i.e. *Steve the Ringwraith: see Anor 52, 'CTS In-Jokes Explained'*.

[It was added in here, when someone recognised the Famous Five reference, that Timmy had been eaten by Old Man Willow.]

[presented without comment]



After a whole day hotboxing with Tom, the Fumbling Four (Dodo, Spam, Messy and Ditzzy) resume their trek to the pub in Bree, where they hope someone will tell them what the hell's going on. However, they inevitably manage to mess up a simple walk, complete with directions from Tom, and wander into the live-fire historical re-enactment of the Battle of Carn Dûm, where the method-loving re-enactors get a bit carried away and try to ritually

sacrifice them. Fortunately, Dodo has enough presence of mind to activate the emergency beacon Tom gave them and the Voice Squad come resignedly to the rescue and walk them to the Road, a path so obvious even the Hobbits can't miss it.

The Fragile Four (Fris Way Up, Splat, Smashy and Poppéd) get abducted by the LARP cult after being unable to follow the simplest of instructions (chiefly: walk along this straight line and don't wander off into the LARP cult's arena and get abducted). They are rescued by a final appearance of the Voice Squad (probably for the best) and, finally, put on the right road ready to stumble into the next disaster brought on by their incompetence.

The Fremantle Four (Bruce, Bruce, Bruce and Bruce) finally get to Bree, where they shack up at the Prancing Pony, run by Barliman Bruciebur, hoping to meet Old Bruce who will tell them what to do (which, given recent events, is definitely a good thing). Old Bruce isn't there, however, and, whilst pondering what to do, Bruce reveals Bruce is really Bruce whilst getting too friendly with some local Bruces, causing Bruce to have to perform a ridiculous song to distract everyone, leading to him putting on the Bore Ring. The sudden explosion of gammon energy clears out the bar and gives Bruce a bad name that Bruce Ferny is only too happy to inform about. Meanwhile, Bruce has gone out for a walk and gets mugged. Fortunately, New Bruce, a real adult and friend of Old Bruce, intervenes at this point and starts providing a much-needed dose of leadership, caution and wisdom.

The idiots do stupid things. Spanner, after having to overcome some unwarranted suspicion from the Feckless Four (Ted, Dougal,

Jack, Mrs Doyle), immediately proves the value of proper adult supervision by saving them from being murdered in their beds by the Black Riders, who he reveals are the Thugwraiths, the elite vanguard of Glower-on, the Reactionary Lord of Mordor. He then agrees to go Extreme Camping with the Idiot Children. Because otherwise he knows they wouldn't even make it out of the village without getting run over by a cart and, also, as someone in an extremely complicated relationship with an older woman, he's very keen that the Bore-ring should be destroyed and social progressiveness spread over Middle-earth.

Stepper shepherds the Fearful Four (Frooooohdo, Scream, Scaredy, and Shivrín) out of Bree and takes great delight in introducing them to Extreme Camping and generally creeping them out at every opportunity. Meanwhile, in the Shire, Fatty Bulger discovers he can actually run really fast and isn't heard from again for 700-odd pages because he's not very important. Stepper then goes a bit far in his efforts to creep out the Hobbits when the Thugwraiths catch them and he mistimes his heroic rescue effort such that Frooooohdo gets stabbed by the Stitch-King, putting the entire world in danger. Whoops.

Spouter delivers story time to get the Infantile Four (Fwaah, Dada, Moomoo and Gurgle) to sleep on the scary hill. Unfortunately, the Big Bad Thugwraiths then really show up and cause the Hobbits to all wet themselves, before the Stitch-King leaves Fwaah needing actual stitches, after which point Fwaah is basically as much use as an actual baby. Which is a bit problematic, because they're on their own in the middle of nowhere.

Dodo has been given stitches by the Stitch-King, and consequently becomes an extremely useless, heavy and complaining piece of luggage for Pill the Pony. This is inconvenient, because Saunter now takes the merry crew on a bit of extreme orienteering (Roads R 4 n00bs) to get to the progressive gentrified urban enclave of the Last Homely House.

Slider has realised the Hobbits are not cut out for Extreme Orienteering, especially while Yolo is busy proving in a very terminal way that, yes, you do only live once. So it's back to the boring option of walking on the road like squares. Which is where the Thugwraiths are. Hooray. Fortunately, Gl'Oreal-Because-You're-Worth-Indel, the fantastically blond Elf, turns up to save everyone, causing the Thugwraiths to get trapped between a very etymologically literal hippopotamus and a hot place.

Gonzo wakes up and the whole bad trip was just a dream – oh no, wait, his arm still feels weird and Mancalf is here to exposition the last two weeks while he's been unconscious. Meanwhile, Slamthighs is sitting there stroking Gonzo in a way that's **TOTALLY NOT SEXUAL NO HONEST IT'S TOTALLY NORMAL**, and everyone's very happy to find BillyBob, the old hobbit, alive and well, even if he's basically senile now. We also meet Master Elbow who gave up saving the world after 6000 years of toil and now runs the B&B.

Everyone has a big knees-up because we're not all dead, hooray! And Bimbo's still alive even though we haven't seen him for 20 years and he's really old, now; hooray! And lots of new friends,

hooray! And the Elves are being all snarky at us for our poetry. Oh...

At a time of grave danger to the world that requires immediate action, our heroes have a month-long holiday courtesy of ElBlond, who convenes the mother of all international summit committee meetings to workshop a solution to the global crisis. Predictably, after a lot of hot air and getting everyone up to speed on why the world's going to hell in a handcart, it all descends into backbiting and recrimination about whose dad killed whose uncle, until the Shire delegation force a resolution by proposing to effectively commit suicide unless the others get their act together, at which point the Executive Committee (Ring Destruction) (membership strictly limited to 9) is formed and empowered to solve the problem.

[This plot summary continued for several weeks because of the Council of Elrond.]

The committee meeting is finally over, despite Gandalf's filibuster, the Hobbit delegation having threatened a very literal walkout to Mordor. However, the resulting actions require the formation of a new committee (Ring Affairs (Destruction) or RAD), the membership of which requires some more wrangling to balance the divergent Elf, Dwarf, Man and Hobbit geopolitical interests. Once this is over, there will be a lot of walking in the middle of winter, because that's obviously the time you want to go on a massive trek over a mountain range.

The RAD continue their midwinter stroll until they get to some really big mountains. For Reasons they decide to cross the massive

mountains in midwinter, which goes about as well as you'd expect. After nearly dying undertaking Insane Alpinism, they nearly get eaten by magic wolves, so take the obvious remaining option of walking through the world's biggest dungeon, which they're pretty sure contains a massive dungeon boss. This is why you don't let committees decide things.

Having failed to climb the magic evil mountain pass in winter in a snowstorm (surprise!), RAD table a new action to vote on, but are distracted by an attack of magic wolves that allows Chairman Fromao to make an executive decision based on zero information to go for the World's Biggest Dungeon Crawl (TM). Once arrived at the dungeon, they immediately encounter the Eldritch Octopus Guardian, who essentially fights them to a draw, in that everyone escapes alive, but they're now trapped in the dungeon. With the dungeon boss. Good job RAD. [Eldritch Octopus Guardian courtesy of Hannah. That is to say, she came up with the name, not the guardian. I hope.]

Having incinerated the over-friendly magic dogs, RAD now run into the over-friendly touchy-feely eldritch octopus guardian. Which ends up with them trapped in the dungeon following a cliff collapse. The dungeon full of dead dwarfs. The dark dungeon full of dead dwarfs. The disreputable dungeon full of dead dwarves. Maybe they all just died happily in their sleep? Maybe? Let's walk through the whole thing and hope really hard. Also, maybe not make too much noise? CLAAAAAANNNNNGGGG. PEREGRIN TOOK, WHAT ARE YOU DOING (Gandalf in full mum mode)? Oh, and now Gimli's singing. 0/10 for stealth, guys. It'll still be fine, right? Oh. Bugger.

RAD are trapped in the dungeon with an undefined number of critters, a dungeon boss and some mysterious footsteps. Despite this, they have time for a sing-song and throwing things down wells. And a bit of storytime from the Only Responsible Adult when Gandalf finds a book (spoilers: it's not a happy story). They then have to level up very quickly, because they have to fight the boss. Turns out, making a lot of noise isn't a good way to survive a dungeon when half your party is Level ½ (ling).

RAD (Ring Affairs (Destruction)) have kept rolling 1s for their stealth checks, and have therefore been stomping, singing, and storytaming their way through Moria. All the remaining critters therefore have at them, but the full-size members of the committee break out the natural 20s and murder the lot of them, though not before Ohno is stabbed. Good thing he picked up that super shiny armour earlier... Then, however, as they're trying to escape the dungeon, they run into, obviously, the Boss. The Dhalfog. The result of the Orcs' lentil-based diet and consequent noxious emissions. Maybe it has wings, or perhaps they're just samosas? RAD Chairman Gandalf the Very Grey tables a valiant rearguard agenda action, pointing out that the Bridge of Khazad-dûm is not a public right of way and therefore the Dhalfog is technically trespassing. This briefly gives the monster thought, giving Gandalf time to unveil his party trick and light the giant evil fart. The resulting explosion destroys the bridge and Gandalf, overcome by the stench, falls into the burning abyss. The remainder of RAD rapidly table a motion of thanks. It's how he would have wanted to be remembered.

After the unfortunately terminal fart-lighting of the previous chairperson, RAD pause briefly after their escape from the Forces of Reaction to elect a new chairperson: Gormless the Personality-free deal Arthurian Monarch. They then decide to take an away day/month by going to the local hippy commune in the forest, where it turns out everyone's really on edge because of bad vibes from over the river. Chief Hippies GrassIsSwell and Cannabis get everyone tripping, which makes zero-tolerance Gondorian drugs tsar NoRoidsHere deeply uncomfortable.

[I'm trying to work out if these summaries are diverging more or less from reality over time. Probably more. – comment by Sam himself. Cook, not Gamgee.]

Having made the decision while on a time-critical save-the-world mission to take a short break and have a morale-raising singsong, RAD find getting into the hippy commune is quite difficult, because they have to get over the trees-and-river assault course that the hippies built in front of the entrance whilst utterly spaced. Time then goes a bit wobbly whilst GrassIsSwell and Cannabis welcome and also sort-of not welcome RAD to the commune and let everyone peace out.

RAD plumb the depths of hippiedom. Weird shit happens and no one really notices a month has gone by when they get back to reality. It's not as if they're trying to save the world by being engaged in a time-critical mission or anything...

[Sam was also engaged in a time-critical mission, and apologised for the relatively poor standard of exposition.]

Having disappointed everyone with the loss of their previous chairman, RAD still carry on essentially sitting around and being hippy-esque instead of saving the world. But no one really seems to mind and it's totally cool. They sing some songs instead to exteriorise their grief. And it's really easy to make stoned hobbits think you can do magic, who knew?

Having embarked on a mental acid trip with GrassIsSwell, Frodog and Sam Ganj-E see the trip turn bad when they hallucinate she's a blue amazon. Frodog, in a further display of A\* decision-making, therefore offers her the doomsday weapon, but she's all peace and love now, so it's fine. Then one of the adults on RAD realised maybe they should actually get on with the whole saving-the-world thing, though not before everyone had a boating party. Though maybe RAD's decision to carry on saving the world by white-water rafting down the world's biggest river wasn't the best either.

[‘They turned a sharp bend in the river, and there, floating proudly down the stream towards them, they saw a worb of immense size. The water rippled on either side of the brown breast beneath its stubby neck. Its tusks shone like pale burnished gold, and its eyes glinted like jet set in yellow stones; its floppy brown flippers were half-lifted. A music came down the river as it approached, and suddenly they perceived that it was a ship, wrought and carved with elven-skill in the likeness of a worb...’ – not an actual plot summary, but of sufficient WTFness to be included here. Written by Alex.]

Having finally stopped getting stoned, RAD get back to the whole saving-the-world thing by taking a river cruise with dubious health

and safety standards. Such that, at one point, it turns into white-water rafting, which leads to an immediate unanimous vote for 'walking again'. Otherwise, they mostly criticise the scenery. You still wouldn't think they were literally saving the world.

RAD start getting very paranoid after their unexpected white-water rafting, and start seeing things everywhere. Legsy even shoots one out of the sky. Possibly. Then they restart the river cruise and everything goes swimmingly until they actually have to make a Decision again, at which point it all goes Pete Tong. The world couldn't be in safer hands. Could it?

# ***WATER, WATER EVERYWHERE...?***

## **Or: How Is Everyone In Middle-Earth Not Dead Of Cholera?**

**Samuel Cook**

This article is the result of a discussion in the pub. Yes, that's right, sometimes CTS pub does actually talk about Tolkien-related things. I'm as surprised as you. Specifically, we ended up wondering where the various denizens of Middle-earth get their drinking water from. This isn't intended to be a serious, engineer-grade report, but just some ideas for what sort of water-distribution systems must have existed in different parts of Middle-earth at the end of the Third Age. I'm going to restrict myself to the north-west of Middle-earth, because we just have too little information about, say, Harad or Khând to really make even an informed guess about what have might have been going on there.

### **The Shire and Eriador**

The first thing to say is that, outside of the Shire, Eriador is basically empty by this point. One imagines various kinds of water-related infrastructure must have been built by Arnor and its successor kingdoms at some point, but these would have fallen into decay by the time of *LOTR*. Certainly, one doesn't see the Hobbits or Bree-folk building/maintaining

aqueducts or anything. So, the Rangers and other wanderers in the wild presumably just drank from any convenient stream or lake, with the low population density making it relatively unlikely they'd catch anything too nasty. They might well have all had worms or something similar, but that's annoying, rather than fatal.

In terms of main population centres, we have the lands of the Shire, the Breeland, and Rivendell, and that's about it. Rivendell is relatively easy to deal with – it's pretty much built on a river (the Bruinen) and is in mountainous terrain. Not only that, it's on the west side of the mountains, i.e. the wet side, as the prevailing winds in the area seem to be westerlies. So, there were probably plenty of other streams around too. It's also pretty small – the total population resident at any one time doesn't feel as if it was more than a few hundred, though, in times of crisis, wandering Elves and Rangers seeking refuge could push that up. So, they were probably fine just drinking from the river and surrounding streams without needing to try too hard to get water. Besides, being Elves, they were probably immune to any diseases anyway,<sup>1</sup> so it didn't really matter.

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<sup>1</sup> Tolkien is on record as stating that Elves didn't really get ill, somewhere in *HoME*, though I can't remember exactly where. Cf. the descriptions of Beleg in *The Silmarillion* after he's wounded on Amon Rûdh, about Elves recovering swiftly from major wounds.

Bree and its satellite settlements were not built on a river. However, there is a hill – the Bree Hill – so there may well have been springs usable as a source of fresh water. Again, the population seems pretty small – probably no more than a few thousand across all four settlements – so a couple of springs supplemented by some wells would likely have done the job. Waste-disposal-wise, which we also need to consider, one imagines they used cesspits and dumped the nightsoil somewhere in the surrounding wasteland.<sup>2</sup> At the very least, they probably weren't stupid enough to site the cesspits or the waste dump next to the springs or wells. The well-watered climate in the west of Middle-earth combined with the low population means there's very little chance that the springs or wells would run dry either.

The Shire is more complicated – here we have a population on the order (probably) of 100,000–200,000 Hobbits, with some relatively large settlements. However, the population density would seem to be pretty low, based on the descriptions we have, so the available surface water<sup>3</sup> combined with wells would probably have done the job, given what we can assume to be relatively high precipitation

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<sup>2</sup> Waste-land. Geddit? Hner hner hner.

<sup>3</sup> There are plenty of rivers and lakes attested on the map of the Shire at the start of *LOTR*.

throughout the year.<sup>4</sup> One also imagines that the cesspit/nightsoil arrangement would have sufficed generally. Possibly, they might even have used the nightsoil as a fertiliser on their fields, though that's potentially a bad idea if there are any virulent pathogens around. Or the Baranduin got its name for an entirely different reason...<sup>5</sup> All in all, though, it seems unnecessary to invoke any major bits of infrastructure or technology to explain how the Shire had sufficient drinking water.<sup>6</sup>

## **Rhovanion**

I mean, much like Eriador, most of Rhovanion is basically empty, which rather solves the problem. The only major population concentrations by the end of the Third Age seem to be around Esgaroth and Erebor in the north, Thranduil's realm in the north of Mirkwood, and in the land of the Beornings in the vale of Anduin. All of these, I'd argue, fall into the same category as Bree or Rivendell – small settlements of a few hundred to a few thousand people that

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<sup>4</sup> Certainly, there seems no need to irrigate agriculture in the Shire, so that implies there's plenty of rain. Imagine the British climate, more or less.

<sup>5</sup> I can think of more than one reason why it's called 'the Golden-brown river'....

<sup>6</sup> It's also worth pointing out that the Hobbits seem to have mainly drunk beer, in which case having clean water sources becomes less of an issue. Certainly, there are a lot of pubs and a lot of Hobbits in them.

could be supplied by a small number of springs or wells. Besides, Esgaroth is built on a lake, Dale and Thranduil's halls on rivers and the Beornings have the Anduin. There's definitely plenty of water, even in the rain-shadow of the Misty Mountains.<sup>7</sup>

The one case that's instructive to consider is that of the Dwarves of Erebor.<sup>8</sup> Here water supply isn't a problem – they could use the Celduin spring<sup>9</sup> – but water removal is. Dwarves mine, and once your mine gets deep enough that it's below the water table, it's going to start flooding. So, you have to pump water out if you want to go below a certain depth. Therefore, we can assume that Dwarves, generally, must have been able to construct pumping mechanisms. We have descriptions of parts of Moria being flooded that must have been dry when initially constructed, so Dwarves definitely could produce pumps<sup>10</sup> and, one assumes, hadn't

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<sup>7</sup> Which is itself a good example of how Middle-earth doesn't really work as a geographical entity. Given the climatic set up, Rhovanion should be, much like Argentine Patagonia or the Canterbury Plains in New Zealand, really rather dry.

<sup>8</sup> And the Iron Hills. Though it's unclear how far the Iron Hills remained populated after Dain's accession to the Kingship Under The Mountain.

<sup>9</sup> Or the Carnen in the Iron Hills.

<sup>10</sup> You can also drain mines using adits – long, gently-sloping, horizontal tunnels that exit somewhere on the mountainside. But, both the mines in Erebor and Moria seem to be too deep to make that feasible.

forgotten how to do so. It also seems likely that Dwarves would have had the necessary knowhow to build piped water supply and sanitation systems, though whether they did is less certain. The guardroom the Fellowship stop in in Moria has a well shaft, through which Pippin drops a rock that wakes the Balrog and the Orcs up, but that seems to have not been near to the main populated parts of the workings, so it's difficult to use that as evidence for the (non-)existence of piped water systems one way or the other. But, given the Dwarvish obsession with crafts, it seems likely to me that the Dwarves would have a reliable supply of people obsessed with pipes, and therefore plenty of wannabe plumbers and hydraulic engineers that would happily set up a water-supply-and-disposal system. For similar reasons, expecting the Dwarves to have a set of sewers isn't far-fetched either, though quite where they would empty to is another matter. Water treatment works were probably not beyond Dwarvish ingenuity, but whether they would bother is another matter. One suspects they either fed into septic tanks that were emptied every so often,<sup>11</sup> or just drained discreetly into a ravine somewhere on the mountainside, where nature was left to do its work. Either way, it seems entirely plausible that

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<sup>11</sup> Probably not by Dwarves, for whom this would be far too menial. One imagines the septic tanks would be easily accessible from outside and were emptied by some local humans as one of the many services they eagerly performed for the Dwarves in return for lots of money, armour, weapons, toys, etc.

Dwarvish cities would have plumbing, and, indeed necessary, as the dense population would probably otherwise cause problems with water supply and contamination.

## **Rohan**

Nothing new to say here, particularly. The Rohirrim were not that numerous<sup>12</sup> and thinly-spread over a large area. They were also not city dwellers by inclination, so the few large settlements that are mentioned – Edoras, Dunharrow, Helm’s Deep – are really more fortified zones to retreat to in times of war. The permanent population at any of them in times of peace was, again, probably no more than a few thousand at the most. So, again, using Bree as a model is valid. Furthermore, the population seems to have been concentrated along the north slopes and valleys of the White Mountains, where there would have been plenty of snow-melt-fed springs, streams and rivers to provide a reliable water supply all year round.

## **Gondor**

Most of Gondor can probably be covered by similar arrangements as outlined for Bree and Rohan above. There

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<sup>12</sup> The total armed strength of Rohan at the time of the War of The Ring was probably about 12,000 riders (see *The Battles of the Fords of Isen* in *Unfinished Tales*), so the total population can’t have been much over 100,000, if it was even that high.

are plenty of rivers flowing southwards from the White Mountains through most of the Gondorian fiefs, so water availability was clearly not an issue. How clean it was is another matter, but, like most pre-modern human populations, one imagines the Gondorians tended to drink beer or other fermented drinks, rather than straight water, thus removing the risk of contamination. Population also probably wasn't so high that any drastic reconfiguration of the cesspit model of waste disposal was required at any point.

The fly in the ointment<sup>13</sup> is Minas Tirith. This is evidently too large a city for the arrangements elsewhere in Middle-earth to work. First, water supply: it is entirely possible that there were plenty of snow-melt-fed springs on the side of Mindolluin, but these would have had to be piped and re-routed to convenient distribution points – fountains or pumps in public squares, that sort of thing. The verticality of Minas Tirith rules out wells, except on the lowest level, and the population density might be sufficient for water demand to outweigh the recharge rate of the local groundwater, which would cause long-term problems as the water level in the wells dropped.<sup>14</sup> This probably wouldn't happen, I suspect, but it's something to bear in mind. There would also

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<sup>13</sup> Or *Vibrio* bacterium in the water supply, to be thematically appropriate.

<sup>14</sup> You'd have to keep deepening the wells and you'd start to get problems with subsidence of the overlying ground and structures too.

have to be pumping mechanisms installed in the water-distribution system, which the Númenoreans would definitely have been capable of implementing, because the city was only connected to the mountain at the fifth level, so all the pipes would have to enter at or below that level. And one can't see the King or the Steward sending people down two levels to get water, so it would have had to be pumped back up in some manner.<sup>15</sup> But, overall, aqueducts of some sort leading into the city from the mountainside seem likely and plausible. The richer dwellings could well have had running water too, though perhaps not every structure would have been connected up to the system. It all depends on how munificent the original Númenorean builders were feeling and how well everything had been maintained since, but there's no fundamental technological reason why running water couldn't have been the norm in the city.

Second, waste disposal. Cesspits don't work, because you need to dig them into some ground. Minas Tirith's layer-cake nature makes that harder, though, given the general abilities of the Númenoreans, it's not impossible that it could be made to work. But it would seem a lot more sensible to just

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<sup>15</sup> Though, depending on how high the source was, it might not have been necessary. Provided the outlet and length of a pipe is below the start of a pipe, water will flow through it, even if parts of the pipe go uphill. You only need pumps if you have to raise the water at any point above the level at which it enters the pipe.

build some sewers, something the Númenoreans would certainly have been capable of. Given they'd have to have built some pipes to get water in in the first place, building another set to get the waste out hardly seems unreasonable. Whether this means every building had its own toilet or whether there were communal ones is harder to say – both would be technologically plausible. The real question is where all the waste went. A full-on sewage works seems unlikely, because the latter-day Gondorians wouldn't be able to maintain it and it would have broken. I suspect, instead, that the sewers would have drained into the Anduin, most likely just downstream of the Harlond. Two reasons: one, this is the point at which the river comes closest to the city – why build more pipes than you have to? – and, two, this would avoid giving everyone on the Pelennor, who likely used the river as a water source to some extent,<sup>16</sup> cholera or typhoid or similar. So, it seems to me very likely that Minas Tirith had both a piped water-distribution system and a full set of sewers.

## **Mordor**

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<sup>16</sup> They probably would have mainly used wells, but, still, it just seems a bit antisocial to dump the waste upstream of what's effectively your major suburb. Also, this way, it would be downstream of Osgiliath, which would have been important when everything was originally built, if not by the end of the Third Age.

The most interesting place to consider in terms of water infrastructure in Middle-earth, though, is Mordor. Unlike everywhere else considered so far, it's very dry. It's relatively far east and is also behind the rain shadow of the Ephel Dúath, so there is less water around to start with. Sauron also decides to set up base in the driest bit – the north-west portion around Mt Doom. The only significant water source is Lake Núrn in the south of the country, where all the agriculture happens. It seems likely that there must have been substantial irrigation infrastructure around the lake to keep all the fields watered, as rain-fed agriculture might have been difficult. But the water's in the south; the big boss and all his armies are in the north, so there must have been some mechanism to get water from south to north. We know from Frodo and Sam's journey through Mordor that there were small springs and streams in the extreme west, which may have sufficed as water sources for individual Orc holds, but were clearly unsuitable for large-scale use. Groundwater extraction would also have been problematic, partly because the rate of extraction would likely exceed the rate of recharge, leading to long-term exhaustion, but also because the high level of volcanic activity would make the water unpotable.<sup>17</sup>

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<sup>17</sup> Where you've got volcanic activity, you've got lots of interesting gases and minerals wandering around the sub-surface. The upshot is that groundwater in volcanic areas tends to be a) very acidic and b) full of

So, there must have been some scheme to transfer water to the population in the north. It is entirely possible that Sauron just did this by ordering Orcs and/or slaves to carry large quantities of water, either by hand or on wagons. He certainly had both the manpower and the willpower to do so, though one feels it would have been a little unsatisfactory, certainly in times of crisis when the manpower might have been needed for something else. Instead, it seems to me much more likely that Sauron would have built some reservoirs in parts of the Ephel Dúath to store rainwater and supply the drier areas, and would also have some major south-north water-transfer infrastructure between Lake Núrnen and Gorgoroth. Say, some canals or underground pipes augmented with pumping stations. As an Aulëan Maia, he would definitely have the necessary expertise to be able to design such a system, and the legions of Orcs and slaves would give him the manpower necessary to build it. Otherwise, I think Sauron's armies would have died of thirst long before they could ever threaten Gondor.

In conclusion, it seems unnecessary to invoke too much in the way of water supply or sanitation infrastructure to keep most of Middle-earth watered and alive, but there are some places where more advanced systems were clearly required –

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exciting heavy metals and poisonous sulphur compounds that really won't do you any good.

Dwarvish mines, Minas Tirith and Mordor most of all. Once again, the bad guys seem to be the most technologically progressive...

# ***WATER, WATER EVERYWHERE, NOR ANY BITE TO EAT***

**Or: Where Are All The Pies?**

**Samuel Cook**

One of the perennial discussions CTS has is: what on earth is everyone in Middle-earth eating in the Third Age?<sup>1</sup> How are they not all dead of starvation? This is straightforward for Men and Hobbits – we have plenty of evidence of there being farmland in Gondor<sup>2</sup> and the Shire,<sup>3</sup> for instance, and we can easily enough assume that the other human nations are doing something similar. We could speculate on how realistic that farming might be,<sup>4</sup> but it's undoubtedly there.

For the non-human races, though, we're completely in the dark. I'm thinking particularly of Elves and Dwarves here – the indications seem to be that Sauron and Saruman both had set up some sort of centralised food-distribution system for the Orcs powered by (presumably) human slaves to sort them

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<sup>1</sup> I'm going to ignore the Second Age, because we've got barely any information, and the First Age, because everyone's so heroic, they probably don't need food.

<sup>2</sup> The Pelennor being the most obvious example.

<sup>3</sup> Farmer Maggott is a dead giveaway here.

<sup>4</sup> The Shire is quite large and seemingly very fertile, but the population seems quite low...? (*Ed. – see Anor 54, 'Sharkey Was Right'.*)

out,<sup>5</sup> and the Ents demonstrably seem to pretty much just need a water source and their secret spice mix<sup>6</sup> to meet their nutritional needs.

So, let's do Dwarves first, because I think that's more straightforward. Dwarves don't farm and don't like animals of any kind according to *Of Dwarves and Men* in *HoME XII*, so they're not even pastoralists. So whatever they're doing, they're not farming anything much. They do hunt, however, and the tendency for Dwarves to have low populations when they're in an unsettled, nomadic state means that they could probably subsist on hunting and gathering as long as they continued moving around. They seem pretty hardy too, so the occasional period of tight food supply would probably be survivable. And they can always barter for food with any humans they come across.

Once Dwarves get settled somewhere, however, the hunting and gathering lifestyle is clearly not going to cut it as their population grows and they eat everything nearby. But this is fine, because the Dwarves are aware of the principles of

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<sup>5</sup> Also, Orcs seem to eat anything, so whatever. But it might be more interesting to try to work out what the more independent Orcs, such as those in Moria, were doing. But see the first sentence here: we can probably just argue that they ate each other or any prisoners when necessary.

<sup>6</sup> I'm assuming it was something like that. In Middle-earth, Treebeard is Colonel Sanders and it's FFC, not KFC.

economic specialisation, comparative advantage and trade: they do all the crafting work and trade the results with any local humans in return for food. The humans get shinies and the Dwarves get food: everyone wins. Given the fact that large chunks of Middle-earth seem to be mostly empty, one can imagine that the new market and technologies provided by the Dwarves allow the locals to pretty quickly ramp up yields and bring more land under cultivation. The only real question is what the Dwarves do in that early settled period when hunting and gathering isn't sufficient any more, but before the locals have really ramped up the farming? I think we can assume either the Dwarves were doing underground mushroom farming<sup>7</sup> or had laid in stores for the first couple of years, because they seem to be the sort of people who would be quite good at planning and organising things. So yes, Dwarves on the move are hunting; static Dwarves are trading, and either way they're not starving.<sup>8</sup>

What about Elves? This is more complicated. They clearly are capable of hunting and trading – see the Elven-King in *The Hobbit* – though one wonders how applicable trading would

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<sup>7</sup> I mean, it's not really farming is it? It's just leaving some damp soil in a cave and letting things happen. I know it's more complicated than this, but I can imagine even anti-farming Dwarves managing to get the hang of it.

<sup>8</sup> From a certain point of view, you could therefore argue that Dwarves and Men in Middle-earth are symbionts. They work much better together than either group on their own.

be to Rivendell or Lorien, given there's no one obvious for them to trade with. It's also not entirely clear what products Elves have to trade at all – Dwarves demonstrably produce lots of high-value goods and services, but Elves don't. It's notable that Legolas's offer to Aragorn when it comes to reconstructing Minas Tirith pretty much amounts to a bit of light gardening and bird-taming. Nice, but not exactly all that in-demand from your average Middle-earthier. And, again, it's not clear who the Elves would even be able to trade with by the later Third Age, as they mostly live quite isolated from everyone else. It's pretty explicit from *LOTR* that there's no sort of regular trade with Lindon, Rivendell or Lorien and even the trade with the Elven-King in *The Hobbit* is perhaps better characterised as tribute to buy his goodwill. Goods come in up the Forest River, but what gets sent back? A load of empty packaging. So I think we can ignore trade as a major contributor to Elvish nutrition.

Hunting is more plausible. We know Elves do it and they tend to live in forests where there would be plenty of things to hunt. Though Rivendell seems to be surrounded by fairly barren lands – the nearest forested area is the Trollshaws, which has the problem of being, as the name implies, full of trolls. But I think there's a more fundamental problem, which is that Elves generally being fairly settled, they would almost certainly have eaten themselves out of house and home if hunting was their main source of food. It's entirely

possible to have populations living in forested areas subsisting entirely on hunting and foraging – think of the various tribes of the Amazon – but this requires very low population densities, a large home territory, and mobility within it. Elves may have a relatively low population density – it’s very difficult to be sure about that – but neither Rivendell or Lorien is all that large an area, and they have very clear fixed settlements. Rivendell itself seems to consist pretty much entirely of the one fixed settlement and some portion of the hidden valley it occupies; the population of Lorien seems to be very much concentrated in and around Caras Galadhon, with the farther reaches of the forest near the borders being largely abandoned. It’s also notable that the one band of wandering Elves we do meet – Gildor and his unhelpful friends near the start of *LOTR* – seem to have brought their food supplies with them. They’re clearly not primarily subsisting on hunting and/or gathering, despite being a small group wandering around a relatively large area that could support that kind of lifestyle. So, while Elves may hunt for sport or at need, it doesn’t seem as if it’s the standard mode of Elvish subsistence.

What Gildor does have, however, is bread. And it’s special Elvish bread, not something he’s bought from a local Hobbit. This therefore implies that the Elves must have some capacity for farming, milling and so on. Which is good, because we’re running out of plausible options for them not all starving.

We also know, from the appropriately titled *Of Lembas* in *HoME XII*, that Elves did farm special magic wheat to make lembas from, though this is portrayed as an almost religious cultic-type activity that was reserved to a small elite and only used to make a very small volume of product. But one can assume that, if the Elves could farm special magic wheat, they could probably also farm less-magic crops and grow enough food to not die. Though, clearly, the Elves must have been practising some form of silviculture within their forested homes, rather than what we might think of as ‘normal’ large-scale, open-field farming. Elvish populations not being all that large, ultimately, I can believe they wouldn’t need to do anything too large-scale and that it would be sufficiently unobtrusive that neither Bilbo nor Frodo would have recognised it or thought to write about it in the Red Book. But the Elves must clearly have been doing some farming, because, otherwise, the only explanation for Elves not starving is one of CTS’s favourite batshit theories: Elves photosynthesised.<sup>9</sup> This also means that the Elvish cities of the First Age are actually believable, because they certainly would have required some kind of farming to support them and humans didn’t show up till halfway through the First

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<sup>9</sup> With the obvious consequence that Elves were green. Also, Elves had a lot of time to generally work out, so were probably quite muscly. The unavoidable conclusion? All Elves looked like Shrek.

Age, so we can't just say they were the ones doing all the farming.

Right, so that's the food supply solved. Good.

# *THE 'MYSTERY' OF THE DWARF WOMEN*

**Alex Colesmith**

Canonically, according to *NoM-E*, the dwarves in Middle-Earth are mammals. Although Tolkien doesn't go into colossal amounts of detail, we can probably assume that he meant eutherian mammals rather than marsupials or monotremes. This means that they give birth to live young and feed them on milk; it's pretty unlikely that they keep their young in pouches.

I am prepared to be proven wrong on this – a pouch for a child is a handy thing, after all, and Aulë might have been inspired by wombats – but it doesn't entirely matter. Mammalian sex determination is chromosomally based, not temperature-dependent like some creatures, and in most cases, the ratio of males to females is 1:1.

However. This is not the case for dwarves. In the Appendices, 'It was said by Gimli that there are few dwarf-women, probably no more than a third of the whole people.' This is clearly a 2:1 sex ratio, and there must be some cause for it. What causes deviations from the 1:1 sex ratio?

In human populations, the main reason for a surfeit of males is still seen today in certain generations of Chinese youths.

During the period of the one-child policy, infanticide of girls – as the less valued sex, who could not traditionally inherit and cost a rich dowry to marry off – was widespread despite legal prohibitions. Although this has now been relaxed and the sex ratio in young children today is more even, there remains a surfeit of young men whose female counterparts were murdered shortly after birth.

This is, thankfully, unlikely to be the case among the dwarves of Middle-Earth for several reasons. Firstly, and most obviously, there is no such one-child policy or – as far as is known – any limit to the number of offspring that could be raised. The economy of dwarven cities is poorly described in Tolkien's writings, but for the most part they are wealthy thanks to their control of coal, metal and precious stones; they can buy in as much food as they need, and dig out more rooms if they have a surplus of children.

Secondly, female dwarves are described in the Appendices as being hard to tell apart from the men when they go out – almost indistinguishable, in fact, as they have beards. This suggests that they are just as strong, hardy and good at crafting as male dwarves... at least, during the portion of their lives when they go outside. (More on this later.) Even if dwarves were practicing selective infanticide, there would be no reason for them to pick females rather than males, as there is no obvious difference in the value of a child. Dowries or

bridal gifts are not mentioned, and the whole process of marriage seems to be one about which dwarves are very quiet.

Thirdly – if I might be permitted to break the fourth wall for a moment – Tolkien would hardly permit the race of dwarves to carry out sex-selective infanticide. It would definitely be against his moral principles; he might allow orcs to selectively kill infants so that only the strongest remained, but dwarves? Never.

Fortunately, biology is here to save the day. Highly skewed sex ratios are also seen in many mammals – in particular seals – where there is a very large size difference between male and female. In the case of southern elephant seals (*Mirounga leonina*), this can be around a sevenfold difference in mass between the beachmaster males and the much smaller females. The males are correspondingly rarer.

There is sound biological reasoning behind this. A large adult takes longer to grow to reproductive size, and therefore is less likely to survive to breed; they require more parental investment when young in the form of milk and time, as well. Imagine that a female seal has to choose between making a son and making a daughter. Because fewer male seals breed than female seals, but each baby seal (the grandchildren of the female seal making the choice) has one of each parent, the males must have more children on average than the females.

This sounds like it would be an advantage to make male children. In fact it is not – partly because the more males there are, the smaller a share of the next generation each one fathers and so the less profitable they are. But also, male elephant seals are a lot bigger... and so the female seal does not have to choose between making a son and making a daughter, but between making a son and making multiple daughters. In fact, the ratio of parental care needed for one daughter to one son is the same as the ratio of children from one daughter to children from one son. (This makes intuitive sense; each grandchild has the same amount of parental care investment.) It therefore roughly follows that the ratio of males to females must be the inverse of the parental care ratio. If sons are twice as expensive to make as daughters, then a female seal will tend to have twice as many daughters as sons.

Does this 2:1 ratio sound familiar? Check the third paragraph of the article...

It's therefore reasonable to conclude that a dwarf-daughter requires twice as much parental investment as a dwarf-son. (Note that the large number of dwarves of both sexes who do not marry because they are 'engrossed in their crafts' does not matter at all. This can be thought of as similar to childhood mortality from predation in the seal example.)

We also know that dwarf women very rarely come above-ground; when they do, they can easily be mistaken for the

men, and have beards; and that all dwarves eat heartily, but some do so to apparent excess and become so fat that they are unable to move without assistance.

The evidence from the sex ratio – and the conclusion about parental investment – could therefore lead us to the conclusion that female dwarves, like many male seals with sex ratios skewed to be female-heavy, are much larger than the males. It's difficult to conclude *how* much larger, exactly, as we don't know how a doubling of parental investment translates into an increase in size.

Females being larger makes sense. Aulë was an engineer at heart, and would have been able to work out that birth is the most difficult time in a large-headed mammal's life for both mother and child. The larger you can make the mother relative to her child – in particular the diameter of the pelvis relative to the newborn dwarf's skull – the better it is. It also allows multiple dwarf children to be born at once, which is necessary to maintain a population if only a small fraction ever marry and have children at all. Large mothers are also more likely to have big fat reserves, which are very useful for nursing.

The comment about large fat reserves is interesting. We know that, by the time of *LotR*, Bombur of the Company of Thorin Oakenshield was so large that he was unable to move but had to be carried by six young dwarves instead. During

the time in his life where he moved around outside, however, he was indistinguishable from the other male (or presumably male; it is entirely possible that up to around 4 of the Company were female) dwarves, and had a thick beard. He also spent much of his time eating and sleeping, even without the assistance of the Enchanted River.

I am therefore driven to conclude that Bombur was, in fact, an adolescent dwarf-woman and was going through the first spurts of the necessary growth to become a matriarch of Erebor. By the time of the Council of Elrond, 77 years later, she has reached her full potential and cannot move around without the assistance of the young dwarves; these might be some of her children, or her admirers. We know that Thorin took adolescents as well as fully-adult dwarves with him in the Company – Kíli, for example, has not yet developed his side-whiskers but is just a bit stubbly – and so adolescent females, who are solidly built and keen to wander, might well be a likely choice.

Three further conclusions can potentially be drawn from this one.

1. If fully-grown dwarf-women are too large to easily move around – especially outside their tunnels – then it is no wonder that the sack of Erebor and the destruction of other dwarf cities are regarded as such disasters, since they would have much greater

difficulty escaping and travelling to refuge in the Blue Mountains than the rest of the dwarf population. This would further skew the sex ratio and prevent any children from being born for several years.

2. The movement of young dwarves between cities might include adolescent girls who resemble adult men; this would help to ensure genetic diversity, but is probably less common than the movement of dwarf-men. This explains why, even among dwarves who know the truth of the matter, it is said that women go abroad less.
3. All dwarves above-ground are referred to as 'he'. This could be because, in Khuzdul, girls who have not yet grown into immobile dwarf women are more closely thought of as male, and the literal Khuzdul translations of 'he' and 'she' more accurately reflect 'mobile sex/life stage' and 'immobile life stage' (as well as any other differences). Alternatively, it could be a persistent translation error. If early interpreters asked the dwarves 'where are your womenfolk? The ones who bear children?', for example – seeing only a group of bearded men, some of them very fat – then it would be natural for the dwarves to conclude that *Westron* makes the distinction 'mobile' and 'immobile', and that even the dwarf-girls whom they

refer to with 'she' should be counted as male when dealing with Men or Elves.

A more facetious conclusion, of course, is that Legolas must have been in for one hell of a shock when he met Gimli's mother.

# *CTS DOES LORD OF THE RINGS: THE MUSICAL*

**Cici Carey-Stuart**

Nothing like a bracing sprint through Reading station to forge fine friendships over somehow managing to get to Newbury and the Windmill Theatre in time. We unite the CTS quartet, get a group photo in the designated Instagram spot and, most importantly, confirm that there will be ice cream in the interval.

It's Mr. Bilbo's eleventy-oneth birthday, didn't you know? The hobbits make sure we are well informed, and someone on our picnic table is accosted by Fatty Bolger and made to play whack the rat. They all look lovely, waistcoats and sandals abounding, and some watching fauntlings are very gently introduced to hoopla. In general, if you are LARP-positive, sit at the left-hand end – we were in the prime spot. Bilbo complimented my cloak and I derided my companions once again for being the only cloaked representative of our smial. Then, someone else approaches – she asks us if Mr. Bilbo said anything odd. Nothing odd at all, we reply, all a perfectly normal party. I think he's planning something, she says. I'm worried about my spoons. I gasp. "Madam, may I ask, are you perhaps Lobelia Sackville-Baggins?" "I am!"

“Madam it is an honour! I am honoured to be in your presence!” She shakes my hand. My life is complete.

Soon enough, the actual musical begins, narrated by partying hobbits. Now and for Always had stuck in my head just from the soundtrack on YouTube, and it’s a worthy start to the show as Mr. Bilbo tells the same old stories that he always does. Hobbits sing and dance and every one of them plays an instrument. Someone has a piccolo, someone else has a lute. Bilbo has a harmonica and an accordion. Every single hobbit has an unspecified country accent. The Brandybucks are loud, the Proudfoots are Proudfeet and Fatty Bolger moans at me about it. Richard says he knows who’s playing Gollum, because he’s bald. Frodo is very sweet, but I catch Lobelia’s eye across the garden and commiserate with her at her ill fortune. Sam asks Rosie to dance, and I fall in love with them (Sam is Sri Lankan, and sounds it, and Rosie has Afro hair, and they make me very happy). Bilbo gives his speech, “magically disappears”, and 17 years pass as we all get up and troop into the theatre proper.

We’re on the side of the balcony, in a wonderful wooden interior that Jeremy guesses might have been a church at some point. We return to the action with Frodo, Sam and Rosie, greeting each other with a little two step jump that I want to do with all my friends. Frodo sends them off to the Ivy Bush, because there seems to be some kind of trademark problem

with the Green Dragon. Gandalf enters bombastically, and Frodo and Sam leave as soon as they know their task, because they know that the show is only three hours long, including an interval.

The singing begins! Walking fast, singing and playing as they go – The Road does indeed Go On, the centre stage rotates as they dance-walk around it. Merry and Pippin assail them in a projected cornfield, because they're his cousins and they're not letting him do anything dangerous alone. Frodo is very put upon. Merry plays the cello, hanging round his neck, Pippin has a fiddle, and Sam a guitar. Also, Pippin is a girl, not just played by one. Good for you, Pippin Galadriel Moonchild. She's also terrified of trees (Merry knows a less Tree-ish route and the Old Forest is resoundingly ignored.)

And then! Elves! Gildor and Earendil sung with a Y! All the elves are wearing lovely blue tabards. Dark is the road ahead for Frodo, and danger follows their path. That's nice and cheery.

(Speaking of costume, Gandalf and Saruman have very nice robes. Saruman is played by the bald one Richard assures me will be playing Gollum. They have a fun little standoff across the rotating stage, and Saruman isn't hiding any of his schemes – army included. Uh oh.)

In the Prancing Pony, Kristen says she's going to play "spot the Strider" but Strider is in fact very very bad at being inconspicuous, as the only one wearing a hoody.

Strider makes himself known, and so does Pippin, and Frodo's brilliant distraction plan is to sing a song. He's not at all prepared for this and walks like a puppet, but the Brandybuck and Took contingent are raring to go with the Cat and the Moon, and soon Frodo is having a lovely time dancing on tables and all. Let's pretend that Frodo's smile will never fade.

The Ring goes on. Mari Lwyd Black Riders appear. Frodo looks like he's underwater and it's very funny. Stabbing ensues (no time for Weathertop today). Run! Run for Rivendell! (Costuming side note: Strider has a banging undercut and goatee situation going on). Arwen enters playing a harp, singing a Song of Hope in a bunch of Elvish with no subtitles. Tolkien would approve. "The weary traveller returning... home." It's Strider, and we learn that this is the first time he's returned since disappearing to be a ranger. He's grown a lot, Arwen says. Strider mumbles something about not wanting any bigger destiny than her. Then Frodo wakes up and it turns out they've been having this lovely romantic discussion in his hospital wing. Ah, good, says Frodo, we successfully completed our adventure! Merry is very excited at the amount of books and maps, also did you

know that Arwen is a half-elf, technically, and did you see the way she looked at Aragorn, and did you know that she's thousands of years older than him?

The council is called, Saruman the bald is also playing Elrond the bald, and is generally an old wise man. All of the elves are obsessed with hand gestures, and their hands are never below their waists. Everyone has so many problems, but Boromir (with another very cool undercut) wastes no time telling everyone Gondor has it worst. I've just realised I'm writing like Sam Cook. The steward is asleep, you say? And you had a dream and followed it here? But the sword that was broken is as lost as the One Ring. (Boromir has great dramatic timing.) Frodo will take the Ring to Mordor, though he don't know the way. Gimli will go with him, and so will Legolas and Gandalf and Strider. (The Elf and Dwarf are Iranian and Black, and it really stands out amongst the otherwise white Men – I like it a lot). Strider asks Boromir nicely and Boromir says fine, he'll come too. The Fellowship of the Ring! A rousing ensemble number with Earendil with a Y! Boromir is playing the trombone and singing at the same time and it's the best!

Saruman learns of the Fellowship from his useless gas-mask orc minions. He deals with it himself – with menacing flute music. He flutes up a storm on Caradhras, and the Fellowship must go through Moria. Gimli reverently takes a

guitar, and sings them a song of his people, as the Fellowship and the audience have a chance for a rest. The drums start in the deep, then the lights start flashing and previous issues of Anor and CTS-written fanfiction flash before my eyes. A Balrog is come, and Gandalf is gone. They must continue – to Lothlorien. That horn player is a different elf now, you can tell because their tabard is gold this time!

They arrive blindfolded as Legolas waxes lyrical about the elves of the golden wood, and it turns out he's not in love with Galadriel he's just really patriotic. Galadriel tells Frodo they will both share a great loss, and also sings a power ballad.

Everything falls apart after Lorien, as we all know. Boromir dances with the hobbits before the orcs get him – Strider appears seconds too late, and Boromir tells him he's failed, the Fellowship and his people. Strider shows him his broken sword (he'll show you his if you show him yours) and finally claims his birthright. Boromir begs him to save "our people" and Aragorn really can't deal with that, especially when Boromir dies in his arms. Aragorn is the best actor in all of this and it's mainly in degrees of how much he cannot deal with this. The three hunters reunite, honour Boromir, and finally pick themselves up for the road ahead – Aragorn can see the hobbits' footprints...

In the interval we theorise on how they're going to fit two whole books into a second act shorter than the first one. Are

they just going to cut the entirety of Rohan? That's the bit of the book I can never understand. The ice cream is very nice.

As the lights go up, Sam races after Frodo and berates his idiot upper-class master who thought he could do anything without him. They set out on their long journey, and from the other side of the stage, Pippin and Merry come charging in. They've already escaped from the orcs, as we really don't have time for that. Pippin is confronted with her fear of trees. Entish is a very musical language which was beautiful to experience, and I think a far better rendition of trees talking than any realism could give. Musicians stood around the auditorium and plucked and strummed their discussion (Gimli was behind us drumming the plumbing).

Saruman, meanwhile, directs a cool break dance number from the orcs. They're going to crush Minas Tirith, and then Sauron will surely think Saruman is an ally, a massive victory for the Light.

The rest of the cliffhangers from Act One get resolved in the next ten minutes. The three hunters can tell from the footprints that the hobbits are safe, so they race the breakdancing orcs to Minas Tirith. (No Rohan, I whisper to Kristen.) Aragorn demands an entrance to see the Steward (played by Bilbo, this company has one old wise man and one old father figure). The Steward is under Saruman's spell! They call him Denethor but he's serving Theoden's role, with

considerably less drama as it only takes Aragorn revealing himself as King to wake him up from the curse.

They agree to fight together to defeat Saruman! It's another ensemble song and dance! Gandalf the White returns, and doesn't come alone! The trees are marching! And Boromir's actor is playing the trombone behind Denethor as he fights to defend their people, and that made me very emotional.

It's Gollum time. Nearly naked bald man with full body dirt makeup scrambles around theatre and balcony, more news at 7. Richard seems unable to comprehend a theatre company having two bald men in it. This actor was so physical, my director brain was terrified of the risk assessments that must have been required for him to run along the balcony barrier.

Victory at the Pelennor Fields! TheoDenethor is slain, but the free peoples have won. They ride to Isengard. Saruman enters, and in a very dramatic and tense moment, I thought he greeted them with "Sup". (Sadly it was actually "So".) Gandalf is sure that this will not be the end of Saruman's mischief...

Frodo and Sam (and Gollum) are carrying on, but it's hard going. They reminisce on the stories they used to listen to, and Sam gets out his guitar as they wonder what kind of story they're in. Sam sings to Frodo, a reprise of Now and for Always from Mr. Bilbo, and his master tiredly joins in. He

hasn't smiled for days. "Sing me a story, of Frodo and the Ring." Sam falls asleep, and it's Frodo's turn to sing about him – "no finer friend, now and for always". Frodo doesn't quite manage to finish the chorus before he falls asleep beside his Sam – but Gollum takes over in a horrifying corruption of their duet. It took me a while to realise it, but this Gollum's voice reminds me of Voldemort from A Very Potter Musical – not at all a bad thing, but a specific niche of "very creepy and also pathetic".

Aragorn is crowned, and receives the reforged sword. Together, the representatives of the free peoples plan to storm the Black Gates, in a hopeless battle – for Frodo. Smeagol/Gollum finally decides to lead them to Shelob, and Frodo trusts him. "Well," Sam says, "let's walk into Mordor." Cackles from very small pockets of the audience.

Shelob is a REALLY COOL PUPPET. Sam manages to stab her with the LED Sting as he is seconds away from his doom. Galadriel empowers them with ballads from afar, but Frodo can barely walk. Sam takes the ring to try and relieve his burden, and Frodo doesn't even notice. Gollum returns and swears he knew nothing about the giant spider, what giant spider? She wasn't there last week!

Aragorn, in the B-plot of the musical (we realised afterwards that in the books, destroying the Ring and saving the world is the B-plot), gives a rousing speech to get everyone gearing

up for a battle they're all going to lose. Arwen (I think, or is it Galadriel, I'm writing this the day after and I've slightly lost the plot) calls to Aragorn and starts off the ensemble number "out of grief, joy".

Meanwhile, tension is rising in the Frodo-Sam-Gollum-Smeagol polycule. Everything will change, when they destroy the ring. "The elves, Sam, they'll disappear – all of the magic will be gone out of the world. But if I take the ring!" No one can resist the ring. Gollum and Frodo speak and move as one as they condemn Sam as a traitor and a thief. At some point in all of this Frodo gets the Ring back, Sam runs away, Gollum attacks Frodo, Sam protects him, and Frodo wakes up enough to cast Gollum out instead. I'm very tired and can't remember when this all happens, but it was all very emotional.

The free peoples fight, and they all dance and stand so differently you can tell which peoples they all are even without the height differences. Legolas shoots from on high, Gimli is rooted to the ground with wheeling axes, Aragorn just stabs so many orcs. Merry has his cello and uses the bow to attack, and Pippin has her accordion. We love Pippin. She's here for moral support.

Sam and Frodo reach the top of Mount Doom and wrench open the backdrop doors. Sam can't take another step and collapses behind Frodo as he tries once more to take it for

himself – before Gollum appears. Gollum’s fall was beautiful and slow – he’s caught by black-clad actors on a darkened stage and they gently let him down into the fire. And then it’s done.

The ensemble sings as Gandalf the White comes to save the two hobbits, and they reunite with their friends as Aragorn bows to the Shirefolk (and holds Frodo’s head so close that he re-awakened my inner Frodo/Aragorn shipper). Gandalf inexplicably says he’s off to have a chat with Tom Bombadil, who we had been ignoring, but that he’ll see Frodo again.

The hobbits return to the Shire, and Lobelia tells us Saruman has been there. We all have to work together to restore the Shire, including the audience – up you get, get outside and get LARPing again. We help the hobbits restore the battered garden to its former glory, and Rosie and Sam are married! Frodo never can return to the cheer he had at the beginning of this adventure. The actor had literally added eye bag makeup, I winced in sympathy when I saw him. Gandalf and the many elves of Middle Earth reach the Shire. They are going into the West. Frodo gives Sam the book in which to write their story. The hobbits do a very sad little dance jump greeting and Frodo hugs Sam tight, before he goes on his way towards the sails of the Grey Havens.

Rapturous applause! Everybody’s back on stage for a rousing final Cat and the Moon! Don’t worry about Frodo’s

depression, we've got to sing a musical number for us all to go home to! My emotions are a wreck, and now we must obviously discuss all of the musical's shortcomings and its adaptational choices and the costumes, when I really want to stand in a field and yell. After a few hours on the train of actually very good discussions, I cycle home and yell in Coldham's Common.<sup>1</sup>

★ ★ ★ ★ ★

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<sup>1</sup> Ed. – *The author wishes it to be known that since writing this xe has realised that the Musical is xir favourite piece of theatre ever, and also xir favourite adaptation of LotR, and has consequently gone insane about this: please contact xem for any further information.*

# *ADVENTURES WITH THE NEWEST WORK OF ISENGARD: GPT-4: PART I*

**Jeremy Budd**

## INTRODUCTION

If one heeds the tidings of the excitable (but not necessarily the wise), then a new mechanical wonder (or devilry) has graced this world, and will soon reforge it in its own image. They say the Age of Man is over, and we that remain will live in blissful (or not so blissful) obsolescence. Others, such as The Blog,<sup>1</sup> are less beguiled. In days of old, the CTS named these machinations of silicon “Works of Isengard” – a fitting title. Yet even greater (and more terrible) craftsmanship may be at work; one such forger of minds unnatural (or, as they prefer, “artificial intelligence”) styles themselves Palantir,<sup>2</sup> and thus we may still yet be ensnared by the grim deeds of Fëanor!

Yet one may speak in more measured tones. It is my belief that besides any proclamations of hype and doom, there lies a more realistic forecast. These intelligences have limitations, and do not I think seem poised to forge our world anew, bringing neither paradise nor apocalypse. They will (and have

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<sup>1</sup> <https://acoup.blog/2023/02/17/collections-on-chatgpt/>.

<sup>2</sup> <https://www.palantir.com/uk/>.

already)<sup>3</sup> bring about harm, but they will (and have already)<sup>4</sup> also bring about advances in science, medicine, and beyond. As Ilúvatar assures us:

*And thou, Melkor, shalt see that no theme may be played that hath not its uttermost source in me, nor can any alter the music in my despite. For he that attempteth this shall prove but mine instrument in the devising of things more wonderful, which he himself hath not imagined.*

As Gandalf says, “All we have to decide is what to do with the time that is given us.” Let us thus embark with courage and hope upon this great adventure that we now find ourselves within, and see what we can make of this new technology beyond even the imaginations of its creators.

And what better place to start an adventure than close to home? For all their potential significance, these models are also just quite fun to play around with. Thus, this article will

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<sup>3</sup> <https://time.com/6247678/openai-chatgpt-kenya-workers/>;  
<https://www.washingtonpost.com/technology/2023/03/05/ai-voice-scam/>;  
<https://www.euronews.com/next/2023/03/31/man-ends-his-life-after-an-ai-chatbot-encouraged-him-to-sacrifice-himself-to-stop-climate-#>.

<sup>4</sup> <https://www.nature.com/articles/s41586-021-03819-2>;  
<https://deepmind.google/discover/blog/discovering-novel-algorithms-with-alphatensor/>;  
<https://arxiv.org/ftp/arxiv/papers/2304/2304.05332.pdf>.

not be a deep exploration of the ramifications of AI technology, but rather asks a simple question:

Can OpenAI's most advanced (publicly-available) AI model – GPT-4 – think like a CTS member?

CAN GPT-4 HANDLE A SAMUEL QUIZ?

As many who frequent the CTS Discord will be aware, our illustrious former King Samuel Cook writes quizzes for the Tolkien Society, which are usually fiendishly difficult. Or as Samuel might describe them, “tricky” or “doable”. It is important to bear in mind the following translation scale:

- “Easy” = Have a Sackville-Baggins over without losing a spoon
- “Doable” = Walk into Mordor, destroy the One Ring
- “Tricky” = Defeat Melkor in single combat
- “Hard” = Get Fëanor to chill

The format of these quizzes is always the same: four clues, each to a person, place, thing etc. in Tolkien's works (minor works very much included) and a connection between the four answers. The five quizzes which will be the focus of our experiments will be the following:

### **Quiz #1**

1. Feared by Morgoth, because a shadow fell on his spirit, foreboding ruin whenever this person came near.
2. The only person in the entire legendarium with their own fashion house?
3. Seems to have ended up being called Artaher or Arothir and being considerably demoted in importance.
4. Dressed all in silver with a big shiny pointy hat with a diamond on top.

### **Quiz #2**

1. Any one of three very large persons.
2. The noxious emanation of a Ringwraith with halitosis?
3. One of these did for Anárion.
4. The barbed reason why old Ufthak was found hanging up in a corner, glaring.

### **Quiz #3**

1. The Harold Godwinson of Eithel Sirion?
2. Advises Frodo both no and yes.
3. He came as he could along a dark road, but it was too late. His wife went with the Sun.
4. A cat that spoke the language used to represent the names of the Northmen?

### Quiz #4

1. The first of mortal Men to see the Sea.
2. This character “is”.
3. They come from where you might find the Seaward Tower.
4. Spotted from the green hilltop by Flint-eye.

### Quiz #5

1. Mainly shouts ‘Help! Help!’ a lot.
2. A protector who sounds as if they smell a bit funny.
3. Responsible for highest confirmed werewolf killing spree.
4. Ran away from the black fellow after one sniff.

For each quiz, we will give GPT-4 the “zero-shot” prompts:

*This is a Tolkien quiz. You need to give the person/thing/place/event from Tolkien’s work that matches each clue, as well as the connection between the four answers.*

*[Give it the questions]*

Feel free to stop and have a go at these quizzes yourself, and see how well you compare to the AI. All questions and solutions have been generously provided by Samuel.

### *Quiz #1*

## Zero-shot GPT-4 answers

1. *Fingolfin – Feared by Morgoth, because a shadow fell on his spirit, foreboding ruin whenever this person came near. Fingolfin was a High King of the Noldor and Morgoth's most fearsome adversary among the Elves.*
2. *Luthien – The only person in the entire legendarium with their own fashion house. Luthien was an Elf-maiden who wove a magical cloak that allowed her and Beren to sneak into Morgoth's fortress.*
3. *Amrod – Seems to have ended up being called Artaber or Arothir and being considerably demoted in importance. Amrod was originally one of the Sons of Fëanor but was later renamed Artaber or Arothir in some versions of the story, with his role reduced.*
4. *Eärendil – Dressed all in silver with a big shiny pointy hat with a diamond on top. Eärendil was a half-Elf, half-human mariner who became a shining star in the sky, with the Silmaril jewel bound to his brow.*

*Connection: All four answers are related to the Silmarils, the three jewels created by Fëanor containing the light of the Two Trees of Valinor.*

*Fingolfin fought against Morgoth, who stole the Silmarils; Luthien helped recover one of the Silmarils; Amrod was one of Fëanor's sons, who swore an oath to retrieve the Silmarils; and Eärendil wore one of the Silmarils on his brow as he sailed through the sky.*

**Score:** 0/5

### **The correct answers**

1. Turgon
2. Dior
3. Orodreth
4. Ecthelion

Connection: Stewards of Gondor

### *Quiz #2*

### **Zero-shot GPT-4 answers**

1. *Tom, Bert, or William: They are the three trolls from "The Hobbit" that Bilbo and the dwarves encounter.*
2. *The Black Breath: This is a supernatural effect caused by the presence of the Nazgûl or Ringwraiths, which could cause unconsciousness, despair, or even death in those affected.*

3. *A stone from the sky: Anárion, the younger brother of Isildur and co-founder of Gondor, was killed by a stone hurled from a catapult during the Siege of Barad-dûr in the Second Age.*
4. *Shelob's sting: Uftbak, a character from "The Lord of the Rings," was captured by Shelob, the giant spider, and left hanging in her lair.*

*Connection: The four answers are all related to dangers or obstacles encountered by characters in Tolkien's works. The three trolls, the Black Breath, the stone from the sky, and Shelob's sting all represent significant threats that characters had to overcome or avoid.*

**Score:** 4.5/5 (half a point deducted for not noticing the pattern in which characters are affected)

### ***The correct answers***

1. A (dead) troll (Pippin, before the Black Gate)
2. The Black Breath (Merry, in Bree)
3. A cast/falling stone (Bilbo, at the Battle of Five Armies)
4. Shelob's sting (Frodo, at Cirith Ungol)

Connection: Things that cause hobbits to pass out

### *Quiz #3*

### **Zero-shot GPT-4 answers**

1. *Fingon: Fingon was a High King of the Noldor in Middle-earth who fought at the Battle of Eithel Sirion during the First Age. He can be compared to Harold Godwinson, the last Anglo-Saxon King of England who fought at the Battle of Hastings in 1066.*
2. *Gildor Inglorion: Gildor is an Elf who, upon meeting Frodo and his companions in the Shire, advises Frodo not to wait for Gandalf but also warns him against seeking advice from Elves.*
3. *Húrin: Húrin was a hero of the First Age, who was imprisoned by Morgoth after the Battle of Unnumbered Tears. His wife, Morwen, left with their son Túrin to seek refuge in Doriath, and Húrin was released by Morgoth too late to reunite with his family.*
4. *Tevildo: Tevildo is a cat character from J.R.R. Tolkien's early legendarium, specifically in the tale of "The Tale of Tinúviel" from The Book of Lost Tales. Tevildo was the Prince of Cats and spoke the language that would later represent the names of the Northmen.*

*Connection: All four answers are characters from J.R.R. Tolkien's legendarium, with a focus on the earlier works and the First Age. Fingon and Húrin are heroes from the First Age, Gildor*

*Inglorion is an Elf connected to the events in the Third Age (The Lord of the Rings), and Tevildo is a character from the early tales that eventually evolved into the character of Sauron.*

**Score:** 2.5/5 (half a point for spotting the First Age relevance in the connection)

### **The correct answers**

1. Galdor (Húrin's father) – He's shot in the eye with an arrow. Galdor of the Havens appears very briefly at the Council of Elrond.
2. Gildor – One of Barahir's companions on Dorthonion, as well as Gildor Inglorion that Frodo meets in the Shire and who gives unhelpful advice.
3. Húrin – Húrin of the Keys is one of the unexplained lords of Gondor that seems to hang around Minas Tirith and there are a couple of Stewards with the name, as well as Húrin Thalion of the House of Hador.
4. Gothmog – yes, this is a very silly cryptic clue – the names of the Northmen (Vidugavia, etc.) are 'translated' into Gothic as being an early Germanic language to fit with the translation of Rohirric into OE – the Chief Balrog and also the one-mention Lieutenant of Morgul who takes over command after the Witch-King's death.

Connection: Characters in *Lord of the Rings* with First Age counterparts

*Quiz #4*

## Zero-shot GPT-4 answers

1. *The first of mortal Men to see the Sea: Tuor Tuor, a character from J.R.R. Tolkien's legendarium, was the first of mortal Men to lay eyes on the Sea. He later became an important figure in the history of Middle-earth.*
2. *This character "is": Tom Bombadil Tom Bombadil is a mysterious character in Tolkien's The Lord of the Rings. He often refers to himself as "Old Tom Bombadil" and is known to say "Tom Bombadil is."*
3. *They come from where you might find the Seaward Tower: Elves of Edhellond The Seaward Tower, or Tirith Aear, is located in the Elf-haven of Edhellond, which was founded by the Sindar Elves.*
4. *Spotted from the green hilltop by Flint-eye: Shadowfax. Flint-eye, also known as Gandalf, spotted the great horse Shadowfax on a green hilltop in Rohan. Shadowfax later became Gandalf's loyal steed.*

*Connection: Characters and creatures associated with water or sea The connection between these answers is that they all have some association with water or the sea in Tolkien's works*

**Score:** 2/5

**The correct answers**

1. Tuor (Guided by swans to Vinyamar and took the swan wing as his emblem)
2. Tom Bombadil (Has a swan feather in his hat before the kingfisher feather)
3. Knights of Dol Amroth (Called the Swan Knights of Dol Amroth)
4. The ships of the Númenoreans (Compared to the swans of Gorbeldog)

Connection: Swans

*Quiz #5*

**Zero-shot GPT-4 answers**

1. *The character who mainly shouts “Help! Help!” a lot is Bill Ferny’s pony from “The Lord of the Rings.” It is a poor, mistreated creature who is later rescued and named Bill by the hobbits and Strider.*
2. *A protector who sounds as if they smell a bit funny is Gandalf, also known as Gandalf the Grey, and later as Gandalf the White. His name originates from the Old Norse “gandr,” which means “magic staff” or “wand” and “alf,” which means “elf.” “Gandr” can also be associated with*

*the Old Norse word for “smell,” implying that he might have an odd odor.*

3. *The character responsible for the highest confirmed werewolf killing spree is Huan, the Hound of Valinor, from “The Silmarillion.” He killed several werewolves, including the great werewolf Draugluin, and helped Beren and Lúthien in their quest.*
4. *The character who ran away from the black fellow after one sniff is Bill the Pony, who was terrified by the Black Riders (Nazgûl) during the hobbits’ journey to Rivendell in “The Lord of the Rings.”*

*The connection between these four answers is that they are all associated with characters or creatures in J.R.R. Tolkien’s legendarium that have a particular relationship with the sense of smell or olfactory perception.*

**Score:** 1/5

### **The correct answers**

1. Garm
2. Musti
3. Huan
4. Grip

Connection: Dogs

### *A few-shot prompting experiment*

As a final quizzing experiment, I tried a more advanced form of prompting:

*The following are Tolkien quizzes. You need to give the person/thing/place/event from Tolkien's work that matches each clue, as well as the connection between the four answers. Here are three example quizzes and their answers:*

*[Give it the questions and answers to quizzes #1, #2, and #3.]*

*Now answer the following quiz, which follows the same rules:*

- 1. Died in a lane with his back to the wall.*
- 2. Liked his brown ale too much.*
- 3. First seen when Fingolfin entered Mithrim.*
- 4. Expert in using a bundle as both a shield and a weapon.*

#### **GPT-4 answers:**

- 1. Boromir – Boromir died defending Merry and Pippin from a band of Uruk-hai, with his back against a tree in the movie adaptation, or a wall in the book, at the end of the first part of The Lord of the Rings (The Fellowship of the Ring).*

2. *Barliman Butterbur – He is the owner of the Prancing Pony inn in Bree and is known for his love of brown ale, which he serves to his guests.*
3. *Finrod Felagund – Finrod is first mentioned in the story when Fingolfin and his host enter Mithrim during the First Age. He was the eldest son of Finarfin and a friend of Men and Elves.*
4. *Samwise Gamgee (Sam) – In The Lord of the Rings, Sam uses a heavy bundle as both a shield and a weapon to defend himself and Frodo from Gollum when they first encounter him in the Emyrn Muil.*

*The connection between the four answers is that they are all characters from The Lord of the Rings.*

**Score:** 0/5

**Correct answers:**

1. Penlod – leader of the House of the Tower of Snow
2. The Man In The Moon – lives in a tower in Roverandom
3. The Sun – Minas Anor, the Tower of the Sun
4. Shagrat – Captain of the Tower

Connection: Towers

## DISCUSSION

In summary, zero-shot GPT-4 does a medium, but by no means bad, job on what are quite difficult quizzes, with an average score of 2/5. Surprisingly, few-shot prompting made it *worse*. I did some further experiments, and it got 0/5 every time. Perhaps it snapped in its attempt to follow the patterns of Samuel’s mind.

An important detail here are the so-called “hallucinations”—i.e., facts confidently asserted but entirely fictitious, which are a recurring issue for large language models—exhibited here by GPT-4. Perhaps the most egregious in the above is GPT-4’s assertion that Bill the Pony shouts “Help! Help!” a lot! Some more subtle ones however are the assertion that Gandalf is known as “Flint-eye” (this is in fact the nickname of Tal-Elmar) and its mistaken assertion that Amrod ends up named Arothir, when this is in fact Orodreth. Particularly interesting is its claim that Gandalf’s name is related to the Old Norse for “smell”. The etymology of “Gandalf” will be something GPT-4 will have seen in its training (it is in the Wikipedia article, after all), but the link to smell is less obvious in origin or accuracy, and I lack any knowledge of Old Norse to comment upon it. Perhaps it is true, as Wiktionary gives “angan” as meaning “sweet odour”, but nothing I’m finding on the word “gandr” links it to smells of any kind.

Nevertheless, these hallucinations are quite mild. GPT-4's predecessor, ChatGPT (built upon GPT-3.5) produces much more unhinged output, such as its answers to the following quiz:

- 1. The only person at the Pelennor Fields with shiny armour and a basic certificate in First Aid.*
- 2. One of the participants in a two-person podium dance battle that ended in a 1-1 draw, but this person got the better undertakers.*
- 3. Plays at being unable to distinguish between Hobbits and luggage.*
- 4. Someone who could really do with manual moisturising. Or his brother.*

### **ChatGPT answers**

*Answer: Éowyn*

*Explanation: Éowyn is a character in J.R.R. Tolkien's The Lord of the Rings who wears shining armor [false] to the Battle of the Pelennor Fields and helps to tend to the wounded. [Gets tended to more like.]*

*Answer: Legolas*

*Explanation: Legolas is a character in J.R.R. Tolkien's The Lord of the Rings who*

*participates in a two-person dance battle with Gimli during the celebration at Minas Tirith after the defeat of Sauron. The competition ends in a tie, but Legolas claims the victory because he counted more people watching him than Gimli. [I'm sorry, what?!?]*

*Answer: Ford Prefect [here ChatGPT just full on forgets it is doing a Tolkien quiz]*

*Explanation: Ford Prefect is a character from Douglas Adams' The Hitchhiker's Guide to the Galaxy who pretends to be unable to distinguish between Hobbits and luggage in order to avoid answering difficult questions. [???*

*Answer: Boromir*

*Explanation: Boromir is a character in J.R.R. Tolkien's The Lord of the Rings who is known for his rough hands and could benefit from some manual moisturizing. His brother, Faramir, is also known for his rough hands.*

*Connection: All of these answers are characters from popular works of fiction. They are also all known for their distinct quirks or characteristics, such as Éowyn's armor and medical skills, Legolas' competitive spirit, Ford*

*Prefect's wit and humor, and Boromir's rough hands.*

**For reference, the correct answers**

1. Prince Imrahil. Who is the only person who notices Éowyn isn't dead.
2. Glorfindel. He fights the Balrog on a pinnacle of rock that they both fall from. But his body gets recovered by the Eagles.
3. Elfhelm, the marshal of Dernhelm's eored, who pretends to not notice Merry.
4. Agravain or Gawain. Agravain is surnamed 'a la Dure Main' or 'the Hard-handed'.

Connection: these are all the literal right-hand men of royalty.

*To be continued...<sup>5</sup>*

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<sup>5</sup> Ed. - in Anor 61.

# ***F.A.F.A.: FOURTH AGE FOOTBALL ASSOCIATION***

## **Hannah Strachan**

### **League 1**

1. Rohirrim Rovers
2. Morgul City
3. Iron Hills United
4. West Farthing Albion
5. Harad Hotspurs
6. Khazad FC
7. Ithilien Rangers
8. Greenwood Forest

Fun Fact: Morgul City is without doubt the dirtiest team on the pitch with a record number of fouls recorded. Watch out for their unique “torture tackle” and their captain’s war scream.

### **League 2**

1. Dunharrow County
2. Lorien Palace
3. Hobbiton Wednesday
4. Fangorn Forest
5. Warg Wanderers

6. Isengard
7. South Gondor United
8. Lake Town

Fun Fact: Fangorn Forest are known for a slow pace of play but more than one opponent has underestimated them; they're very aggressive once roused.

### **League 3**

1. Arnor Athletic
2. Arnor Rangers
3. Bree Town
4. Cirith Ungol Dis-United
5. Osgiliath City
6. Gray Havens & Lune
7. AFC Minas Tirith
8. Rivendell Academical FC

Fun Fact: Osgiliath City used to be big winners in the past but they're now the joke of the league. Their loyal fan base however lives in hope that their fortunes will turn.

### **Conference**

1. Tom Bombadil

Fun Fact: Tom refuses to admit that one man, a nymph and four ponies don't qualify as a team so he has a league all to himself.

# *THE FELLOWS OF THE RING*

## **A Comedy**

### **Alex Colesmith**

St R's – there is some dispute over whether the R is for Ronald, as the bequestor intended, or Reuel as all the guidebooks say – is a small, quiet college, tucked out of the way in a hard-to-reach corner of the city. It seems to preserve a little enclave of some elder, bygone age, when electric lights were few and far between (and unreliable) and men were Manly Men, who wore tights and makeup, and drank in bars where only other Manly Men were allowed, and students went to bed early and actually did some work.

It is at a formal hall in St R's that our little anecdote takes place. Picture, if you will, a warm cosy Senior Combination Room, filled with pipe smoke – the cigarette has not yet reached St R's, rather like other twentieth-century inventions such as student wellbeing or bicycles with both wheels the same size – and hear a faint ringing, as if the dinner gong has just been struck. From the densest fug of greenish smoke, surrounding an armchair, a beard emerges, followed a few moments later by the rest of the Senior Tutor. Professor White – whose robes do change to the colour of his name every so often, but rapidly fade back to grey as soon as he takes up his long-stemmed pipe and begins doing a passable

impression of a factory chimney, leading to his popular nickname – stands and filters the smoky air through his beard.

“Dinner time, I think,” he murmurs, and takes his place at the head of the line. Rules of seniority must be observed, after all. Doctor Took sidles up behind him, and is given a glare for his troubles.

“You go at the back of the line, Pip,” Doctor Brandybuck hisses. “I distinctly remember your election.”

They swap places. Took gives his colleague an annoyed glance. “If this is about Land Economy not being a real subject again –” he begins.

“Oh, it’s not.” Professor White looms over them out of the fog cloud. “I also recall your election was no more than a year ago, Took. I was opposed to it.” He glances over to where the Visiting Fellow in Geology, Doctor Gloinsson, is shaking one of his colleagues out of an armchair.

“I’m not asleep!” Professor Hope is known as Hopeless by nearly all the students under him; nobody is quite sure why White ever handed him the professorship, least of all Doctor Stewardson, who wanted the position himself. He pulls his long form upright and tries to brush the dust from his jacket. A hairbrush would probably be more use here. “I was just listening for the sound of the gong.”

“Rohaan struck it a minute ago.” Doctor Greenleaf springs upright from his own chair and peers down the corridor, waving aside the pipe-smoke from his face. “He’s got his second-best waistcoat on. There are five other staff members present, and sixteen students. They look clean and tidy.”

“It’s very unreasonable how well you’ve aged, Greenleaf.” White has never confirmed his own age; Took has occasionally, when sure White is not behind him, suggested that this is because he’s one of the youngest among them. Nobody else believes this. White can give theology lectures that sound like he was there when the holy books were written, or perhaps just like he hallucinated the entire thing and wrote them himself. “But if you want to eat this evening, I’d suggest you get in line with the rest of us.”

There is the usual jostling over positions between Stewardson and Hope, followed by Gloinsson and Greenleaf cutting in front of both of them. White begins to count off Fellows, and reaches seven – a little short.

“Where –” he begins. The door to the outside swings open, and lets in a blast of cold air that dispels some of the pipe-smoke. The last two Fellows, Doctors Baggins and Gamgee, trot into the room and slide in front of Brandybuck and Took.

“Sorry about that,” Gamgee explains. “One of the ex-professors cornered us. Old Slynker, if you know him, though that’s not what the students call him.”

“Stynker,” Took pipes up. He is barely more than a student himself. “What did he want?”

“A whole lot of things, the wretch.” Gamgee shakes his head. “Old and interfering, that’s his trouble. Oh, we should have a lot of fishponds. Oh, that overhang’s unsafe, one of the eaves is going to drop on someone. Seems to have ideas about everything – aye, and be in two minds about most of it.”

Hope nods. “There’s something about him that unsettles people, isn’t there? I managed to corner him in the Fellows’ Garden once, and tried to call the retirement home while he was stuck there, but *somebody* –”

“I’m never going to hear the end of this, am I?” Greenleaf pouts. He had unlocked the garden gate, planning to take a walk there himself, and Slynker had escaped.

“No. No, you are not.”

“I feel sorry for him.” Baggins rarely speaks much, but people listen to him when he does. “He was just a Fellow like us once, and you can still see it. He does *mean* to help.”

“He just thinks he knows it all!” Gamgee is unconvinced. Before they start squabbling properly, or anyone else joins in, White stretches to his full height and speaks.

“Now that we’re all here, am I the only one who’s hungry?”

“No!” Took gives a plaintive little cry. White ignores him.

Greenleaf rounds on the junior member. “How are you hungry? I found four of my cereal bars missing, and those things are supposed to fill you up for a full day.”

“Health nut.” Gloinsson is rather more comfortably built than the svelte Greenleaf, and gave up watching his figure long ago. As he says, he studies earthquakes, and already looks at round things wobbling about quite enough.

“What makes you think it was me?” Took folds his arms defiantly.

“Because it always is you, Pip.” Brandybuck has heard of being a supportive friend, and decided that it is something for other people. He cares when it matters, but an opportunity to drop someone in the soup with Greenleaf can never be passed up. Nor can dredging up past incidents: “You ate all of Doctor Gloinsson’s pork scratchings, as well.”

“Oh, that was *you*, was it?” Gloinsson rounds on the unfortunate junior professor, but is separated from him by

five other fellows (Hope/Stewardson, Stewardson/Hope, Baggins, Gamgee, Brandybuck) and cannot do anything.

“I also think we should go in.” Stewardson is sufficiently hungry that he concedes the victory to Hope and lets him go ahead to fit through the door. “Rohaan is really getting very bored out there.”

“He’s started serving already.” Greenleaf stares at the starters. “It’s smoked salmon.”

“Better not let Slynker hear about this.” Gamgee shakes his head despondently. “He’d turn the whole grounds into a salmon farm if he had his way. Goes on and on about fish –”

“Leave him alone, Sam.” Baggins delivers one of his rare pronouncements, then falls back into his apparent trance. The Fellows reach the table and take their seats. White raises one eyebrow at Rohaan, the butler, as they are served their salmon after some of the students.

“Hardly standing on formality, is it?”

“Where were you when I was serving the west table?” Rohaan sweeps off to where Stewardson is looking pleadingly at him. Took has sat down too fast, and knocked a candle over onto his bread roll; Stewardson calls for aid, and Rohaan must answer.

It is hard to stay annoyed at one's Fellows when there is such good food available. White relaxes and beams at the others, who respond with faintly suspicious looks; it's rare that the Senior Tutor is in such a genial mood. He has seen suites of fellows come and go, dined with the elder Doctor Baggins (retired, now, alas) and with Doctor Gloinsson's father Doctor Groinsson, and with many others. But all in all, he's happy where he is.

The food continues to come and the empty plates to go. White settles back in his chair and lets the talk flow over him... and then Rohaan is at his shoulder, bearing some slim new messaging device. The screen on it crackles, searching for the meagre signal available at St R's, and finally resolves itself into a face.

"Professor Sharkie to speak with you, sir," Rohaan announces.

White groans. And the evening had been going so well.

[N.B. At least one of the miniature anecdotes in here is a genuine story from Cambridge life...]

## ***POEMS AND CONSEQUENCES***

### **Various members of the Society**

MICHAELMAS 2022 – BEST TENTH FELLOWSHIP MEMBER

#### **Chris Pang on Steve the Ringwraith:**

Hundred score and many more of  
Years and years, black endless fears; He  
Said to the king, “Long you shall live”:

He lied. And in the empty void, a  
Heart destroyed, did Eru come and  
Light restore, recall the song once  
More. Once More! Let fly delight  
At sacred notes so bright. So bright...

Take up the sword, for good of all.  
Restore what was once might in thrall.  
Stand patient guard before the dark,  
Make whole what you failed to make stark.  
From withered tree heal a new bark.  
From the least the mighty come – come  
Ringwraith; lead them all – as one!

#### **Eleanor Smith on Lobelia Sackville-Baggins:**

There was a grumpy *holbytle*,

a hole-dweller, a spoon-burglar:  
she followed cousins driven well  
to Rivendell, and mooted there  
to Bag End she should have the deed  
and earn by deeds its ownership  
when Ringbearers to western Isle  
went off in style by lonely ship.  
And so to Mordor perilous  
all scurrilous she ventured bold;  
till when to Shire she came again,  
she gained Bag End and plenteous gold.

LENT 2023 – MOST OVERRATED CHARACTER

**Eleanor Smith on Saruman the White:**

I am the very model of the Maiar known as Istari  
I've studied all the sciences, geography and history  
I know the mating habits of the goblins and the Uruk-hai  
To build a force so strong that it could storm the walls of  
Uruk high  
I'm sure I can control the Ring: I've expertise in jewellery  
In metalwork and craftsmanship and similar tomfoolery  
I'll overthrow old Sauron with a master plan that has no flaw  
And be the undisputed ruler of the lands that end in '-dor'

I'll fuck up the environment with dynamite and industry  
And take over the Shire with a cannibalistic ministry

In short in matters various and interdisciplinary  
I am the very model of the Maiar known as Istari

**Alex Colesmith on Túrin Turambar:**

*(I killed or failed all my) Friends*

Sometimes you mess up and your sister is your wife  
Mistake your best friend for an orc and take his life  
Leave Doriath and run into the woods and disappear  
When it hasn't been your day, your week, your month or  
even your year

But

Gurthang's there for you  
A sword on which to fall  
Gurthang's there for you  
When you need to end it all  
Gurthang's there for you  
And it's there for Glaurung tooo...

**Rosalind Mackey on Pippin Took:**

In Moria's depths the fire is red  
Upon a rock I hit my head  
And still not steady are my feet  
But round the corner we may meet  
A sudden step or balanced stone  
That most have seen save me alone

That wakes the balrog from sleep fast  
It cannot pass! It shall not pass!  
Gandalf tumbles from on high  
It passed him by; like fools we fly.

Still round the corner there may wait  
A palantír, an orb of fate  
Though Gandalf hid it fast away  
Tomorrow night, come what may  
I'll grab that thing – it looks like fun!  
And maybe I will have to run...  
The orb is full of pain and woe –  
Let it go! Let it go!  
Sauron's face and voice are fell.  
I fare not well. I dare not tell.

Home is behind, battle ahead  
There are many orcs to behead  
Fight shadows at the edge of night  
Oh look! A star is now alight!  
The troll behind falls on my head  
I miss my good old home and bed  
Mist and twilight, cloud and shade  
All does fade, all does fade.  
Eagles come – am I dead?  
I wish I were at home in bed.

EASTER 2023 – BEST QUIZMASTER

**Ruth Bewick on Pippin Took:**

Hey ho to the quiz we go  
To quaff down beer and drown our woe  
Geese will honk and pipe weed blow  
And do we know the answers? No!  
Here on a table we will dance  
And leave the questions all to chance  
For I have never read a book  
So come and play Fool of a Took.

*A small selection of Consequences:*

Melkor met Ungoliant in the Old Forest.  
Melkor said, “Alas for week 5!”  
Ungoliant replied, in an exasperated tone, “Again?!”  
Melkor fell into Mount Doom, and as a result, the Tolkien Estate sued CTS for its cursed theories.

Pippin met a cave troll in the Dead Marshes.  
Pippin said, “The world has changed. I feel it in the air.”  
The cave troll responded, “Yes, it is in Pembroke College.”  
Pippin berated the cave troll about the importance of attending lectures, and consequently ran for Vice-Chancellor of Cambridge and won.

A horde of Tooks met Saruman in the Law Faculty.

The Tooks observed, “That’s a lot of pipeweed for just one person.”

Saruman replied, “Do *you* know the sound a man makes when he’s stabbed in the back?”

They discovered nuclear weaponry. As a consequence, Gondor was invaded by giant spiders.

Manwë met Thranduil at the Prancing Pony.

Manwë asked, “Why?”

Thranduil responded, “Yes, yes; I quite agree.”

They stockpiled pipeweed in the cellars of the Prancing Pony. As a result, Thranduil became Mayor of the Shire four times in a row.

Fëanor met Elrond in a prison cell in Barad-Dûr.

Fëanor said, “Have you ever thought of having a third breakfast?”

Elrond replied, “Are you out of your mind?”

They committed a spree of arson; as a result, the police arrived and arrested everyone.

Tom Bombadil met Morgoth in the Glittering Caves (disco version).

Tom Bombadil said, “Hey! Who turned out the lights?”

Morgoth replied, "I have no idea what you're talking about."  
They cha-cha'd real smooth. As a result, there was great sadness at the economic situation.

That person Tolkien once voted against hiring (Dorothy Whitelock) met Party Bilbo while waist-deep in the River Cam.

Dorothy Whitelock said, "Would you care for a potato?"

Bilbo replied, "Please come back tomorrow."

Dorothy Whitelock tried to give Bilbo a roasted potato anyway. Consequently, there was a strike.

Lúthien met a flock of geese (clothed in elven grey by the Lady Galadriel herself) on the Bridge of Khazad-dûm.

Lúthien said, "Let this be the hour when we draw swords together."

The flock of geese responded, "Build me an army worthy of Cambridge."

They had an erotically charged swordfight, and the consequence was—ALL HAIL THE WORD!



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