



# English Learning for Curious Minds



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## Episode #009

# Who Owns Space (And Why Does It Matter)?

### December 17, 2019



[00:00:03] Hello, hello, hello, and welcome to the English Learning For Curious Minds podcast by Leonardo English.

[00:00:09] I'm your host Alastair Budge, and it's time for the final part, part three of our three-part mini series on who owns the sea, sky and space.

[00:00:19] And this means today we are talking about space, who owns it and why that matters.

[00:00:25] If you haven't already checked out parts one and two, which are who owns the sea and who owns the sky, then I'd really recommend listening to them first.

[00:00:34] You can certainly listen to this podcast without having listened to the others, but you'll get a lot more value if you've listened to the first two as they will help explain some of the things we'll be talking about today,

[00:00:46] And this is your [customary](#)<sup>1</sup> reminder that you can grab a copy of the key vocabulary and transcripts for this podcast on the website, which is [Leonardoenglish.com](http://Leonardoenglish.com).

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<sup>1</sup> usual, normal



## Who Owns Space (And Why Does It Matter)?

[00:00:56] Okay then, let's get cracking.

[00:00:59] Space, the final frontier, the cosmos,

[00:01:03] The moon, sun and stars have of course, **captivated**<sup>2</sup> the minds of philosophers, scientists, and just about everyone since the beginning of time, but they were always so far away, so unreachable that there was no need to think about ownership.

[00:01:21] Of course, a large proportion of major religions and belief systems held the stars and space as the **realm**<sup>3</sup> of the gods, the afterlife, and so on. They belonged to the gods.

[00:01:34] And even for those who might not believe in any kind of **supernatural**<sup>4</sup> properties of the stars or space, it seemed **implausible**<sup>5</sup>, so unbelievable, impossible that anyone could actually get there.

[00:01:47] So what was the point of deciding who would own it if they could?

[00:01:53] Then in the latter half of the 20th century, everything changed.

[00:01:58] Starting with Sputnik One, the first satellite to be sent into space in 1957, mankind had finally sent something **into orbit**<sup>6</sup>.

[00:02:08] And just four years later, in 1961 Yuri Alekseyevich Gagarin became the first human to ever make it into space.

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<sup>2</sup> attract and hold the interest and attention of; charm

<sup>3</sup> a field or domain of activity or interest

<sup>4</sup> (of a manifestation or event) attributed to some force beyond scientific understanding or the laws of nature.

<sup>5</sup> unbelievable

<sup>6</sup> sent into space



## Who Owns Space (And Why Does It Matter)?

[00:02:18] It suddenly became clear that space wasn't beyond the [realms of possibility](#)<sup>7</sup>, and there was a real sense in the 1950s and 60s that space was going to be where the Cold War was fought.

[00:02:31] You only have to read some science fiction from the fifties and sixties to understand quite how real the belief was that space was the next [logical](#)<sup>8</sup> frontier for the battle between East and West.

[00:02:44] Given that space was no longer beyond the reach of man, there needed to be agreement about who owned it or rather who didn't own it.

[00:02:54] The rest of the earth, sea and sky was divided up, but space, well, that didn't really belong to anyone.

[00:03:03] Neil Armstrong famously placed an American flag on the moon in 1969 which may have [implied](#)<sup>9</sup> some sort of ownership, but this was just [figurative](#)<sup>10</sup>.

[00:03:14] It didn't actually mean anything.

[00:03:16] The fact that the Americans were the first people to set foot on the moon didn't mean that they owned the moon any more than you or I do.

[00:03:26] Why not? I guess you might be wondering.

[00:03:28] Well, in 1967 a treaty was formed documenting the laws of space. It is now called the Outer Space Treaty, but previously it went by the slightly less [catchy](#)<sup>11</sup> Treaty

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<sup>7</sup> what people think is possible

<sup>8</sup> something that makes sense

<sup>9</sup> suggested but not directly expressed; implicit

<sup>10</sup> without real meaning

<sup>11</sup> easy to remember



## Who Owns Space (And Why Does It Matter)?

On Principles Governing The Activities of States in the Exploration and Use of Outer Space, Including The Moon and Other Celestial Bodies.

[00:03:50] So it seems like a sensible name change to have made.

[00:03:53] For those of you who remember part one of this series, you may recall the United Nations Convention on the Laws of the Sea, which was actually signed a little later, in 1982. The Outer Space Treaty is a similar kind of concept, but for space.

[00:04:08] From the point of view of ownership, it's actually far simpler than the Convention on the Law of the Sea because well, it states that no country can claim ownership over any part of space, that nobody owns it.

[00:04:22] It states that space exploration shall be free for all countries for the benefit of mankind.

[00:04:29] As a [side note](#)<sup>12</sup>, the main purpose of the Outer Space Treaty wasn't actually to define ownership, it was to [ban](#)<sup>13</sup> the use of nuclear weapons or weapons of mass destruction in space.

[00:04:40] Remember, there was this very strong belief during the Cold War that there was this real possibility, and certainly in the West at least, that the Soviet Union could send nuclear bombs into space and then fire them back down on the US and of course [vice-versa](#)<sup>14</sup>. The USSR believed that the US would do the same to them.

[00:05:01] So in terms of ownership of space, where does that leave us? If nobody owns it, what does that actually mean from a practical point of view? Are countries free to go

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<sup>12</sup> something that's not relevant to the main argument or subject

<sup>13</sup> prohibit, not allow

<sup>14</sup> also the opposite way around



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to the moon, Mars and beyond, and not to have to worry about anything, as it doesn't belong to anything?

[00:05:18] In a world, or should I say in a, in a universe where humans colonise Mars, who actually owns the land, what laws apply?

[00:05:28] At the moment, some of these definitions are a little [loose](#)<sup>15</sup>.

[00:05:33] For starters, the definition of space isn't clear, as we talked about in part two and there's currently a working group at the UN trying to tidy this up.

[00:05:44] It looks like the [demarcation](#)<sup>16</sup> of space will be at the Karmen line, as listeners from part two of this series will remember as the line a hundred kilometres up from the Earth's surface.

[00:05:54] At least the definition of where space ends on the other side is clear. On one level at least it never ends, right? It's everything beyond where it starts and it is expanding.

[00:06:05] And in terms of how countries or companies should interact within space, there also isn't a huge amount of clarity provided here.

[00:06:14] As the treaty was principally around ensuring that space remained a peaceful place, free of nuclear weapons, there isn't much [provision](#)<sup>17</sup> made for commercial activity in space, be that space tourism or the use of space for natural resource extraction.

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<sup>15</sup> unclear

<sup>16</sup> a dividing line

<sup>17</sup> a condition or requirement in a legal document



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[00:06:29] So the law is unclear on whether a private company can go to the moon, Mars, or beyond, [mine](#)<sup>18</sup> natural resources and bring them back to the Earth for profit.

[00:06:40] Of course, on the Earth's surface, if a company did this, then they would have to pay some sort of fee to the country that owned the territory.

[00:06:49] But in space, if nobody owns it, well who would they pay?

[00:06:53] this is the unclear part.

[00:06:56] There is a [proliferation](#)<sup>19</sup> of companies that are trying to develop technology for a future where there is some level of colonisation of space, from Elon Musk to companies like Moon Express and Planetary Resources, but no clear legal [framework](#)<sup>20</sup> for how they should all work.

[00:07:13] Why is this important?

[00:07:15] Well, the space industry is set to grow to \$1 trillion by the year 2040.

[00:07:21] You don't have to hear it from me that the Earth is overpopulated, with the global population predicted to hit 10 billion shortly after 2050 and of course, natural resources are finite and space entrepreneurs believe space to be an [untapped](#)<sup>21</sup> source of resources.

[00:07:40] Just Google Elon Musk colonise Mars if you want to learn more about this.

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<sup>18</sup> dig in (the earth) for coal or other minerals

<sup>19</sup> rapid increase in the number or amount of something

<sup>20</sup> a basic structure underlying a system, concept, or text.

<sup>21</sup> (of a resource) not yet exploited or used



## Who Owns Space (And Why Does It Matter)?

[00:07:44] Another aspect of space ownership that isn't particularly clear is that although space itself isn't owned by anyone, anything that goes into space is technically [sovereign territory](#)<sup>22</sup> of the state from where it was launched.

[00:08:00] So a Russian spacecraft is technically in Russian territory when it's in space.

[00:08:05] Similar to the Convention on the Law of the Sea, ships have to obey the laws of the country where they're registered.

[00:08:12] This is a similar idea, but for space.

[00:08:15] This of course becomes all the more complicated in the event that the space shuttle, for example, is damaged and splits into lots of different pieces.

[00:08:24] If, for example, a Chinese launched satellite is damaged and splits into a thousand different pieces, a million different pieces, this could be [interpreted](#)<sup>23</sup> to mean that there are a thousand, a million little pieces of Chinese territory orbiting the earth.

[00:08:39] Where almost everyone is in agreement is that ownership of outer space needs a lot more clarification and current global laws are not [set up](#)<sup>24</sup> for a world of space mining, space travel and and large scale colonisation of other planets

[00:08:57] I don't think we're in any danger of that happening in the immediate future.

[00:09:01] Although I guess people back in the 13th century looked up to the sky and said, we don't really need to worry about figuring out who owns that, there's no one will ever get there.

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<sup>22</sup> land owned by a nation state

<sup>23</sup> understood

<sup>24</sup> prepared, ready





## Who Owns Space (And Why Does It Matter)?

[00:09:09] And then evidently they did.

[00:09:11] In terms of space entrepreneurs though, and ownership of space, it's not all scientists building rockets and space shuttles.

[00:09:20] Indeed, the lack of clarity on ownership of space hasn't stopped one American based entrepreneur trying to sell the moon and Mars.

[00:09:28] Dennis Hope of Nevada has been selling land on the moon and Mars since 1980. In fact, for less than \$20 you can [grab yourself<sup>25</sup>](#) an acre of the moon, perhaps a nice Christmas present.

[00:09:42] I should point out though, that the probability of this [holding up<sup>26</sup>](#) in court is comparable to your probability of actually being able to get there, and so I'd hesitate before deciding to [plough<sup>27</sup>](#) your life savings into becoming a [lunar<sup>28</sup>](#) real estate [tycoon<sup>29</sup>](#).

[00:09:58] Okay then, today we have covered who owned space.

[00:10:02] On one level, the answer is simple, nobody, and yet everybody.

[00:10:09] In 2019 this may not be a huge issue, but in a world or should I say universe where space becomes more [congested<sup>30</sup>](#) than it is today, then ownership is going to be

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<sup>25</sup> buy, get

<sup>26</sup> be considered legally binding

<sup>27</sup> invest, put all your money

<sup>28</sup> relating to the moon

<sup>29</sup> a wealthy, powerful person in business or industry

<sup>30</sup> busy, full of traffic



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a bit of a [thorny](#)<sup>31</sup> issue and there certainly needs to be a lot more work done on clarification of how it actually works.

[00:10:30] I hope that you've enjoyed this podcast and this mini-series on who owns the sea, sky, and space. If you haven't listened to the first two parts yet, then they are well worth a listen, if I may say so myself.

[00:10:42] Ownership of stuff is, well, it's complicated. It's not something that you think about every day, but I find this kind of stuff absolutely fascinating.

[00:10:52] Stay tuned for more mini-series like this. It's been a fun one to make and I hope that you've learned a lot about who owns what.

[00:11:00] As always, thank you very much for listening to the show. If you've enjoyed it, then do consider taking 20 seconds out of your day and leaving a review.

[00:11:09] Every review puts a smile on my face and tells people what the podcast is about, so those are two pretty good things.

[00:11:17] And if you want to get the podcast zooming into your podcast app of choice every Tuesday and Friday, just hit that subscribe button and it'll arrive like magic.

[00:11:26] Okay, you've been listening to the English Learning for Curious Minds podcast by Leonardo English. I've been Alastair Budge and I'll catch you in the next episode.

[END OF PODCAST]

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<sup>31</sup> difficult to manage



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**Who Owns Space (And Why Does It Matter)?**



## Key vocabulary

<b><u>Word</u></b>	<b><u>Definition</u></b>
<b>Customary</b>	usual, normal
<b>Captivated</b>	attract and hold the interest and attention of; charm
<b>Realm</b>	a field or domain of activity or interest
<b>Supernatural</b>	(of a manifestation or event) attributed to some force beyond scientific understanding or the laws of nature.
<b>Implausible</b>	unbelievable
<b>Into orbit</b>	sent into space
<b>Realms of possibility</b>	what people think is possible
<b>Logical</b>	something that makes sense
<b>Implied</b>	suggested but not directly expressed; implicit
<b>Figurative</b>	without real meaning
<b>Catchy</b>	easy to remember
<b>Side note</b>	something that's not relevant to the main argument or subject
<b>Ban</b>	prohibit, not allow
<b>Vice-versa</b>	also the opposite way around
<b>Loose</b>	unclear
<b>Demarcation</b>	a dividing line



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<b>Provision</b>	a condition or requirement in a legal document
<b>Mine</b>	dig in (the earth) for coal or other minerals
<b>Proliferation</b>	rapid increase in the number or amount of something
<b>Framework</b>	a basic structure underlying a system, concept, or text.
<b>Untapped</b>	(of a resource) not yet exploited or used
<b>Sovereign territory</b>	land owned by a nation state
<b>Interpreted</b>	understood
<b>Set up</b>	prepared, ready
<b>Grab yourself</b>	buy, get
<b>Holding up</b>	be considered legally binding
<b>Plough</b>	invest, put all your money
<b>Lunar</b>	relating to the moon
<b>Tycoon</b>	a wealthy, powerful person in business or industry
<b>Congested</b>	busy, full of traffic
<b>Thorny</b>	difficult to manage

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*What did you like? What could we do better?*

*What did you struggle to understand?*

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