

Transcript: Frammartino

Animal Vegetable Mineral: A podcast to think with and about documentary films.

STL: In this episode of Animal Vegetable Mineral, we are featuring Alisa Lebow's interview with Italian filmmaker Michelangelo Frammartino. His films are associated with the Slow Cinema movement as well as with Eco-Cinema. Frammartino is a fascinating filmmaker and he was one of the keynote speakers at the Visible Evidence Conference in 2023 in Udine.

AL: I had prepared to interview him in person at the conference and I had all my notes and questions ready and then literally at the last minute, the morning I was supposed to board the plane to Italy, I came down with COVID.

STL: Yep, that was really sad, but we improvised. So I sat with Frammartino in a classroom at the conference site and you connected with us online.

AL: Yeah, I was so sad not to be there in person. And the audio of our different locations and different microphones and different everything is a little bit unfortunate, even though I think the interview went as well as we could have hoped. I totally loved talking to him.

STL: Yeah, he's amazing. So thoughtful, so expansive in how he thinks about documentary and time and the environment. Well, let's go to the interview.

AL: We were incredibly fortunate to have the opportunity to speak with Michelangelo Frammartino, one of Italian preeminent documentary filmmakers, and someone who expressly reinterprets conventions in documentary, whether in his efforts to decentre the human, or in his seeming disregard for the boundaries that might distinguish documentary from fiction.

In the English speaking world, Frammartino is best known for his 2010 film *Le quattro volte*, or the four times. More recently, he has made a film called *Il buco* (2021), something of a period film set in the early 1960s when the Bifurto Abyss, one of the deepest caves in the world, Europe's deepest cave was discovered in Calabria. The film uses re-enactment to set the stage, including shooting the spelunking expedition 700 metres underground in absolute darkness. Michelangelo, thank you for agreeing to speak with us at AVM.

MF: Thank you for the invitation, my friend.

AL: I hope you don't mind. I know you have a beautiful new film out, but I want to start by asking you a few questions about your previous film, *Le quattro volte*, and then we can move on to *Il buco*.

Let's begin with the title. Maybe you can just explain to us why you chose *Le quattro volte* and what it refers to.

MF: I try with my English to say this. There was a sentence by Pythagoras, the philosopher who lived in Calabria 1000 years ago, and I started working on this movie in 2005. So it's 20 years ago. But the sentence was something like, "the human being is made by, there is a part that is mineral, the skeleton. There is a part that is a plant. A human is able to move. Sensibility like an animal. And there is this rational part that is deeply human. So to know well, deeply yourself, you have to know yourself four times (*devi conoscerti quattro volte*).

AL: the podcast that you've agreed to do this interview for, is actually called Animal Vegetable Mineral, so it seems absolutely fitting to be speaking to the person who was inspired by some of the same thinking that we've been inspired by.

MF: It's great for me. Thank you very much.

AL: And I believe that that was part of the three out of the four elements that Pythagoras considered to be part of the human, but actually part of everything, right, all matter had these three elements animal, vegetable, mineral, in some versions of the Pythagorean idea. Because Pythagoras never wrote anything down. Nobody really knows what he actually said.

MF: Yeah, absolutely. In Italian is actually "*attribuita*".

AL: Right, attributed to Pythagoras. And then some say that actually he was talking about the four elements that constitute everything, including fire. So animal, vegetable, mineral and fire. And you also have fire. Very much represented as an element in your film, given that you're interested in the attribution of what makes up the human. That you use these elements in the film as existing in their own realms. The human is just one element among others. I think you've said in other contexts that the human point of view isn't really of interest to you. It seems to me that you actually put the human in perspective. It's not that they are irrelevant or uninteresting, but that they are not the centre of attention. Maybe you can explain to us why this equal time or ample time is given over to these other non-human? You know.

MF: *Le quattro volte* was made in Calabria. Was shooted in Calabria and an important part was shooted on Monte Paulino. And *Il buco* was shooted on Monte Pollino. That is in the north of Calabria. And you know in that area there are many ancient rituals that are arboreal rituals, rituals with plants. No, and you see in *Le quattro volte*, there is this ritual with this big tree, that is an *abete bianco* [silver fir]. It's a huge tree. And for the people living in this area, nature is not a background. That this belongs to them. No, it's not something that I'm giving to them, they are

giving to me this idea of a balance. Between the human being and what is around, you know? So the human is not the centre.

Now this is very important, you know, in cinema you have Bob De Niro in the centre of the image and the tree is out of focus. Bob De Niro is fantastic. But the tree is not bad. So what is interesting is to [trails off], because we are not the only character on the planet. No? This is the difference. In *Le quattro volte* for me it was interesting for me trying to work with all the elements as main characters. This was very important and you know it's so in our culture, we are the centre, no, for humanity, human beings are the center and all the other stuff are behind. No? It is very hard to make a movie like this for technical problem. Now when you are going to the sound mix, I made it in Berlin, a very beautiful place with now we are friends we are many years working together, but the first time I went there, you know that in the cinema you have many speakers and the speaker in the centre, in the middle of the screen belongs to the humans, that is for the dialogue. But it's a very important speaker because it gives the presence, the presence of the character, no? And in my second episode (I don't think that *Le quattro volte* is really separated, but ok) in the second episode, I have a goat that is the main character and when I asked to put the voice of the goat in the [center] speaker they told me no, I'm sorry it's not possible because it's for the dialogue. And we discussed that. We stopped the mix. And we discussed it for one week. Then they said no, I'm sorry, but the voice of an animal goes in the surround, not in the main speaker. At the end, they accepted that the main character of the second episode was a goat, so it was allowed to put the voice there [in the central "dialogue" speaker].

Well, the same thing is when you work on colour with the colourist, the first thing that you work on is the skin of the character and many times in my movie there is no human, so, you are lost, you know. Because if you do not have the skin, then you don't have all the other stuff. So it's interesting because cinema is very anthropocentric and is hard to work trying to find a different balance.

AL: This is amazing. I mean to analyse it. You know, technically there's been a lot of analysis about race and skin tone. The way in which Kodak film stock was developed, really, with only concern for white skin. But, this is also crucial, I think, to consider the human-centrism of our technical apparatus.

I want to go back to Pythagoras because there's the other idea that's attributed to him, is this one of metempsychosis, or the transmigration of the soul, the soul that didn't die, but moves on.

FM: Yeah, yeah, but this is something that survives in the popular culture in some way. I don't know if it's really connected, but I can say to you that when I was a kid, when I was a young guy and I was in Calabria, I was, I have to say that I was born in the north, in Milan, so in an industrial city, but my heart belongs to Calabria, to this

rural fantastic place, and my grandmother was a peasant. And I remember that when I was going in the countryside with her and many times we met a snake and she was saying to me, oh, you see the snake? This is a soul. This is a soul of something that made something wrong and now it is a snake. So this idea of Pythagorean transmigration probably became something that is deeply in this animistic vision, popular vision. But what was very important for me about Pythagoras is that the legend says that behind *un velo*.

AL: A curtain.

MF: A curtain and that the students could not see him, no? And there was this voice coming from behind. And in fact, the students, the name of the students in the school was "acousmatic". That means a sound that you don't see where it's coming from. Now in cinema acousmatic sound is when you hear, but you don't see, and for me when we're working on the sound of the movie I wanted to use only a sound coming behind the screen. And I used the five point one only in the darkness. Because for me it was important to have the same situation of Pythagoras' lessons because for the students they had in some way to imagine what there was behind the screen but in *Le quattro volte*, you have to make the same thing because you know that the animal is not exactly an animal. That is something behind the image, no? So, Pythagoras was technically important, no? It was like an installation you know, it was like recreating the room of the lessons in some way.

AL: And it makes sense. I mean, he was the mathematician, he was very technical. I was thinking that there's also a kind of innate relationship between cinema and animism, in that it already kind of re-enlivens the dead, as it were. Is that an important connection for you at all, or is that just something in my own head?

MF: For me, there is an important connection, no? Because it's true that you can see something that is not alive anymore and you see a thing moving so alive, no. But this is not enough in the sense that for me a movie or a scene, an image is alive not only because it's moving, you know, but it's alive because there is a strong relation with you. Alive is something that is changing.

I don't know, I studied, I have to say that I studied cinema in school, but I studied architecture too. Studying architecture was for my education, more important, you know, and in architecture you know it's very important that you don't, when you make the project you give space to who will live in the space, no? You build a house. You must give space to the inhabitant who will live in it to change what you are doing, or they will be forced, you impose a way to live. So the architecture must be alive in some way, no?

Cinema is the same. You must build something that allows the viewer to change something. Usually I make images very wide and very deep. You know if when you

make an image where the focus is very precise, in that point, you are saying to the viewer: "watch that". So there is no freedom. Instead, when you have, it's very deep and wide, and there are many elements, you can choose, no? And this for me, not only this obviously, is more alive, you know, because when I'm watching, I have to work and I have to be related. In architecture it's the same in other ways. I love when architecture can be alive and be related to how people are using it, and this is the same in cinema, no? The eye of the viewer must work and change what you did.

Yeah.

AL: I'm going to shift gears a little and ask the inevitable question, given that we're doing this interview for a documentary studies podcast and our listeners, like us, are interested in questions related to the documentary form. Let me just ask you right out: Do you consider your film work documentary?

MF: No. No, but the fact that I don't, it's not so clear for me the difference, so it's not. I don't understand exactly the difference between fiction. It's not so important for me as, I don't know, I love Pietro Marcello's movies and, so I love *La bocca del lupo* (2009). He's a friend. *La bocca del lupo* is a masterpiece for me. And. And someone says that is a documentary: ok. It's, it's a movie.

AL: Perhaps what's interesting to you, or part of what's interesting to you about this type of cinema is not understanding whether it's documentary, sort of blurring those boundaries.

MF: It means the fact is, obviously, when you work on reality, you know, the act of watching is transforming.

AL: You sometimes refer to the type of cinema you make as "cinema real", so this is clearly a term that's in currency in Italy, but maybe you can talk to us a little bit about what that means to you.

MF: My cinema, someone says that it is "*cinema del reale*". I don't know its definition. I don't know if I agree, it's not, it's not so important. What I like is the fact that, it's interesting for me the fact that, I work watching a lot the reality. I don't work in my room, writing on a page, on a computer, building a story, and then I start to look for a place to create the story. I don't work in this way. I'm in relation with reality, with places, with people. And it happens sometimes that I find connection between elements and I start to think that it can be a project, no? So if *cinema del reale*, cinema of reality, means that there is a strong relation with reality, it's ok for me.

I'm someone that thinks that in some way I prefer that reality is stronger than me, no? I don't want to impose on reality my idea and my meaning, but I like that reality seduces me. We cannot find a balance between different elements like mineral, animals, plants if we think that we are stronger, that we are more important, no? We have to find a balance so we stay in the middle, no? We stay in the... If I stay in my

room and I write the project it means that I think that I'm the creator. I'm God and then I create. Instead, in fact, I work in the middle of the world, in the middle, I'm more balanced. I'm part of this reality.

AL: And this is a philosophy that is very, very attractive to me and it sort of resists that illusion of mastery even while you know you're doing some very fine, we can even say masterful, work, but you're not trying to control the whole scene.

MF: I'm human. This is a problem and I'm human, no? So this means that there is a part of me that wants to control. And I feel this. And I struggle a bit with this part, no? There is a part of me that wants to control. What I try to do is to find my work in the middle of reality and to choose elements that are stronger than me that I cannot control. And that I don't want to control, even as I feel that there is a part of me that wants to control. So I choose elements that are really strong that have a strong identity and that I cannot control. And in this relation in some way I want to lose and I don't want to be the one that controls the elements. No, I prefer that the elements control me or I go in their direction.

AL: Well, we are all losing. I think that's true. I'd like to turn the discussion now to talk about your new film, *Il buco*, literally in English translating as "the hole". When the cave was discovered and explored, it was thought to be the second deepest cave in the world. And you literally shoot into the depths of the earth. So, first, maybe you can just talk a little bit about how you shot this film because it's obviously a very complicated space to film in.

MF: Yeah, it's when you enter a cave as a director, the first thing that you think too that this is not a good place for cinema, no? Absolutely. Because it's dark, it's wet and there is nothing. Ok? So, but what is interesting is that there is the unknown and the opportunity to go on the border between what you know and the unknown is there. And you know that cinema is always about borders, no? So this was interesting for me and I started entering in caves in 2016.

You know cave explorers, speleologists, just are very shy persons and they don't tell that they are cave explorers. They are not like, I don't know, climbers that say, wow, I'm a climber. Good morning. I'm a climber. A speleologist doesn't say it. So it was a surprise for me to know that a friend in Calabria was a speleologist. He never told this to me and it was a surprise to discover that in a beautiful place that I went so many times there was a second landscape under. It's very fascinating. The fact that a place that for you is familiar has a secret. That a person that is a friend has a secret. So I wanted to understand something more and I entered with him in caves. I started entering and I started to be on this border between known and unknown and I started to think that it was possible to make a movie.

But to do this I worked. I had to train two years to understand how to move because at the beginning I was a bit, not a bit, I was scared by caves, by the darkness and the fact that you can find wells there are more than 100 metres and even if I made a lot of sport in my life, sport is a important part of my life. But the [height] was always a problem for me. And training, month by month, I started to, after one year, I was ok inside. I could stay. I could sleep inside. I could stay a lot. Move. And I started to think it was possible to shoot because... and Bifurto, this cave that was explored in 1961, is a vertical cave. This means that you can move only on rope and we shooted until 400 metres down. So it was, yes, it was hard. It was hard. Very hard. Yes.

AL: I found it really interesting that you worked with very famous cinematographer Renato Barta and I, and he was already in his mid 70s. I believe when you were filming

MF: He was 75 when we made the movie, yes, yes.

AL: So for our listeners, Renato Barta has worked with many well known fiction film makers like Manuel de Oliveira, Amos Gitai, Louis Malle. I'm really very curious to find out how you ended up working with Renato Barta on *Il buco*.

Renato was a friend of Giovanna that worked with me. I teach in Locarno film school and he teaches there. So we met before. And I asked him. I didn't ask him to be the cinematographer, but I asked to be a consultant because I was a bit worried about making an historical movie for many reasons. Because historical movie is total control and usually my cinema is up on the line between control and not control. And so I asked him to suggest some cinematographer and asked him to be a consultant for this young cinematographer. But when Renato understood that I wanted to work in the darkness, that I wanted to work on the black, on a very deep darkness, he was interested in doing this movie by himself, because for him darkness, he never did something like this. Because, you know, in cinema the darkness is something that you have to control, you know? When you have a dark corner in a movie, you see something, because if you don't see it's a mistake, no? It's a problem of the image, no? You have to work, in Italian it's *sotto esposto* [under exposed], no?

And instead in this movie, I was working on part of the image that had to be really black and so he said, I never did something like this. I would like to do but I cannot enter the cave because he had a motorbike accident a few years before so he had some problem moving. And so we started discussing, we started testing cameras for the black, for the darkness, digital and film cameras.

And we started working together. And at the end we worked in a very interesting way, because I was entering the cave and he was outside and we were connected with fibre that was taking the image in real time to him that was in front of high quality

screen and we were connected. We could speak. I was far underneath [below] him. He was outside. But we were working together, discussing.

AL: So who was the actual camera operator? The physical camera operator?

MF: It was Luca Masa that he's an operator and a speleologist and a cave explorer with a huge experience as a cave explorer and a good experience as a camera operator, and I'm not bad as a camera operator, but Luca is very good as a speleologist. And he's a big guy. So there was a part of the movie that was made in a part of the cave where it is a very narrow meander so he couldn't enter. So in that part of the cave, I did by myself, but Luca was the operator.

AL: And your interest in capturing the dark, it seems to me is yet another frontier of cinema. Pushing the borders of what's possible.

MF: When the dispositive [aparatus] has problems it is more interesting no, and darkness for an optical machine is a problem. It's strange to use an optical machine to go where you don't see. But yeah, everything works, became more interesting on the border and it was in post-production was beautiful, working with Renato and when we were working on the colour of the movie, no, and watching: "You see?", "No, I don't see". "There is something there?", "no". So we were on the border between visible and invisible. It was a nice work. But, you know, the movie changes a lot in one screening room or in another screening room. It depends on the projector. And this is funny and interesting, the fact that it changes, the images change a lot.

AL: I'm going to describe one scene that made me really think a lot about lighting in a cave. It's the scene where there are two speleologists who are apparently trying to check the depth of how far this hole goes down, and one of them rips a page from a magazine and lights it on their headlamp, which turns out to be just a simple flame, not a light bulb. They light this page on their headlamp and throw it down, and I thought, is it possible that they're lighting this scene with just a flickering flame from a headlamp? So that's a question of how you work with the lighting on this.

MF: We shoot with the lamp. There is no additional light. And at that time, they were using acetylene, that is a gas. It is the same dispositive that people working in mines were using. There is this gas that makes a flame and ancient spelology was made by this type of helmet with this light, this flame. So we built a team half with flame and half with an electric light. And in that scene they are using the flame. We are not using additional light.

Renato worked a lot looking for the right camera for the situations and at the end, he tested the CCD sensor, the digital sensor of many, many cameras in searching for the right camera to work with only the light of the helmet and this was very important for us. It is connected to the problem of controlling and not controlling.

Using only the light of the helmet, means that the real cinematographer is the actor, because, no, the actor moving the head changes the space, you know. And this is why I decided that I could make an historical movie, because in an historical movie you have to control everything, no? Because everyone must be dressed in the right way. At the same time I can't, I couldn't control the light. So I couldn't control the actors because a speleologist was in a real cave and he had to take care of his life, no? Because he was in a cave on a rope with 100 metres behind him. So they were moving, they were free and they were changing the image always.

STL: You said earlier, in the previous film, that you like to have a very large depth of field and a wide image so that the audience has a lot of freedom in where they can look. And I wonder how this limitation, in the cave, yeah, in the cave?

MF: I made the widest possible in the cave, no? You know, wide means that you open as [much as] possible, no? And, I did the most open image possible in a narrow meander, no? Obviously. What is really, it's interesting that in this type of space, it works in a different way, no? You cannot decide, really decide, the point for the camera. You cannot do this because to go three metres to the left you can work three days. Because you have to use the rope to build something to put the camera. It's a huge, huge work. So in some ways, we fixed the camera where the speleologist fixed the rope. Ok, so the point that is important for him, this was the point for the camera too. It is the way of the water, no? Because the cave is made by the water. So the water drives the explorer and this water drives the director in some way at the same time. And what I have to say is that inside the cave you don't have a fixed image because the light is moving no? So it's always changing. And you don't really see the figure, the character, because you see the gaze of the character because the gaze is the light. So the rules that you use outside are not the same.

AL: Yeah, it seems like a really different set of rules and a different set of challenges.

MF: In the cave, there is breathing in some way, the image is breathing because it's always, always, always changing

AL: and it's also less familiar for us, so it's all something to kind of explore with you to examine, to live.

MF: Obviously, for me, choosing to work in a cave was because the cave is immersive. You enter the darkness. And when you are in a cinema, you are in the same situation, no? For me, the audience of this movie is like a team of speleologists entering the darkness and forcing the border between the known and the unknown.

AL: I'd like to ask you a set of questions that have to do with time in this film. In particular in *// buco*, there seem to be different sets of temporalities, time being a really important element. There's the cave, the hole that's formed millions of years ago and operates on what geologists call "deep time." Then there's, let's say the old

shepherd, who is kind of ancient in human terms, but you know, he seems like he's from an entirely different era, but his temporality is much more limited. He's at the end of his life and he has very small world. Then there's the incursion of the modern with these explorers, you know, in a new kind of time.

MF: Yeah, well, this is true. There is the time of geological time. There is an idea of time that is more connected to rural countries.

It's funny because when you enter a cave, you are far from the sun. There is no light, ok, and something happens to you. We have a biological system.

AL: Internal clock.

MF: Yes, there is an internal clock, *ritmo circadiano*...

AL: Circadian rhythms.

MF: And when you stay for a long time in the darkness, you lose it. And so you don't you don't have any more the perception of time. This happens always when you enter a cave. You think that it is 2 hours that you are inside and it's 10 hours, 12 hours. Always, no? And they say don't look at the watch because you don't have to run in this type of space. You have to stay with another time, no? So this is an incredible experience. So there is really another time, you know, that space explorers the *astronauti*,

AL: Astronauts train in caves?

MF: The European trains in Sardinian caves, because they have to work together, but they have to stay in the darkness. They have to be slow and to find another time. There is another perception of time when you are there.

The first time that I slept in a cave, it was in Sicily. I wanted to make this experience because someone suggested me you have to do it. So I was in this cave, in a camp inside the mountain. It was night, I think. And I fell asleep and when I started sleeping, there was the light of the lamp around me, and after I don't know, two hours, three hours, I woke up. And everyone was sleeping. So I was in a darkness in a very, very, very deep darkness. And I opened my eyes. And there was no difference between closed and open, no? So I tried to open more, to reopen, because it was the same, you know... and the feeling that I had was that I couldn't understand if I was really awake or not. And that in some way I was inside myself, not inside a cave, but I was blocked inside myself. And it was like a panic attack. I never had a panic attack, but I think that was very similar. I felt that I had to go out immediately from this darkness, no? I have to say that being in a cave is like being inside yourself. And there is in a strange space that belongs to yourself, in a darkness that is inside you. I don't want to say something magical or poetic. It's an experience. And this happened to me. In 2018, in Sicily. Since that moment I woke

up in the night and I think that I'm in the cave of Sicily. Since 2018, it happened ten times to me.

AL: So you open your eyes and you don't see.

MF: That I think that I'm blocked inside myself, after this strange experience, no? So I'm only saying that there is a strange perception of time and space that you can explore in caves.

There is a very important Italian speleologist, his name is Andrea Gobetti, and he says that the real important thing in speleology is a time revolution. And we tested this in the shooting, no? Because we were producing a movie. So you have money, financing, so you have to start at seven and you can work ten hours, ok. But it is impossible to decide when you enter a cave. It's impossible. You start dressing slow. You starting putting the equipment, no? And there, my friend Marco [Serrecchia], the producer, was watching me. But what are you doing? Enter... It's something strange in timing and it's very, very interesting. But it is not magical. It's something that you have to check.

Inside the cave things happen that are very strange. There are sound mirages. Because the sound in the cave is strange and there are not individual, there are collective mirages and when you are with a team and you are coming out, no, of the cave. On the rope you must go only one person, no? So, you wait [for] that person [to] finish, no? And then he says "free, free rope." So you go, you know, and it happens many times to see, to be the last of the team and to hear someone behind you and you say "it's free". And then you say, "Oh my god, but there is no one behind me." But there is a sound coming. Probably it's the echo, probably. But it is very, it's very strange what happens when you stay so long in the darkness.

AL: In your last two films, you've got an old shepherd, a dying shepherd. So it seems this is a motif in your films, and in fact you very nearly film their death on screen. You certainly allude to it.

MF: There is a scene in the movie because you know that when the explorers enter the caves, there is a shepherd outside that is watching them and in the moment that they enter, because you know, no one [had] entered the cave before. A shepherd knows the cave but never enters. It's like forbidden. And the explorers enter to the secret of the mountain. In the same moment that they enter, the shepherd falls down sick, completely sick, like in a coma, and in the moment that they touch the bottom of the cave, he dies. So there is a connection between the mountain, the exploration and this man.

And you know, there is a moment that when this shepherd is sick in bed with his friends around, that the doctor of the village (that is the real doctor to the village where we shoot) comes to visit him, to visit the inside. Ok. And you know that there

is a moment that he uses a lamp to watch the eye, to watch inside. And in the same moment, there is a strong light entering the cave, so there is a strong connection between our inside and inside of the landscape.

And it is funny because 1895 is an important moment, but it's funny because 1895 is the foundation of the first speleology association. But it's the same year that Freud wrote *Studi sull'isteria*.

AL: *Studies on Hysteria*

MF: That discovers the darkness, our darkness, and it's the same year. So there is this connection between darkness and darkness, inside and inside, and.

AL: And the fact that it was their exploration that results in his death, that actually really intrigues me, as if to know the darkness to its core, down to its depths, is death.

F: Yes, it's like they go too much inside, no? They, they destroy the secret.

AL: We've been speaking with Michelangelo Frammartino. Thank you so much for this wonderful interview. It was a pure pleasure speaking with you.

STL: Alisa, thanks so much for this enlightening interview. I loved how you got him to articulate the way that his environmental values suffuse his approach to filmmaking.

AL: This interview makes me want to go spelunking

STL: Well, and hopefully it'll make our listeners want to watch *Il buco*.

AL: Right. And if they haven't seen *Le quattro volte*, they should definitely see that film. It's still one of my favourite films. I teach it what I'm trying to get across the idea of decentering the human.

STL: You can find our show notes, information about Frammartino's films and full transcripts of all of our episodes on our website. www.reframe.sussex.ac.uk/avm1.

AL: *Animal Vegetable Mineral* is produced by Samuel Topiary Landberg, myself, Alisa Lebow, and Ritika Kaushik. This episode was edited by Topiary. The sound mix was done by Niks Gjorts. And AVM is published by Reframe, University of Sussex. Our website url is: www.reframe.sussex.ac.uk/avm1.

STL: Thanks so much for listening to this episode of *Animal Vegetable Mineral*. Bye for now.