

The Science of Rhythms

Kristin Hussey, in a conversation with Tine Nygaard

By Tine Nygaard

Kristen Hussey is a science historian. She was invited to experience the works of Ruth Campau and give her opinion of them based on her own professional expertise. She began her visit by walking around the exhibition on her own. After almost an hour, I met up with her to hear what she had experienced.

Kristin Hussey: I think this is probably the piece that I spent the longest amount of time with. It evokes the natural kind of processes of the sun setting and the cycles of day and night. It's interesting because it reminds me of a conversation I was having with the scientists I collaborate with – they are chronobiologists – literally yesterday. They were trying to explain the concept of amplitude to me.

Tine Nygaard: Amplitude?

KH: Amplitude is a mathematical term. It's what they use to determine how strong a rhythm is. When we think about our circadian rhythms, how we are active in the day, and how we rest at night, I feel like we think of it in a very simple way, but rhythms move, they change, and they get stronger, and they get weaker. So, if you were looking at a scientific drawing of a rhythm, it would go up and down. If you have a low amplitude or a weak rhythm, the curves are very tight, like here (points at yellow parts of "Sunset Boulevard"). If you have a strong and powerful rhythm, the curves are even bigger. The scientist was struggling to communicate this to me. It's important to them, and it took me a long time to get it. There's something about this work (Campau's "Sunset Boulevard"), especially viewed from the side, that feels like it is a better representation of amplitude, and the ways that rhythms change, and oscillate, certainly more than any of the scientific drawings they showed me. They were still and simple, and just one line. It's not just the colours, but the way it moves, the way it changes.

TN: What makes it a better illustration of the rhythms? Is it because they are not only a line, but are 3D?

KH: Yes, they are 3D, and there is a sense of movement and dynamism in them. You can almost feel the weight of the curve because of the way the fabric is hanging.

TN: Does it also have something to do with the hand-painted material?

KH: Yes, I think so. Also, that it isn't regular or perfect, because that's another characteristic of rhythms, they repeat, but are never the same. I have to bring this back to the scientists to show them. I'm struck by how accurate a representation of circadian rhythms this is.

TN: Would you briefly explain what these rhythms, these circadian rhythms are?

KH: Circadian rhythms are our daily, 24-hour rhythms that almost all living beings on the planet have, because we all evolved in the 24-hour light-and-dark cycle of the planet. These rhythms govern big behavioural changes in our lives – that we are awake and active during the day and sleep at night, but also completely minute things like how our digestion works, even how our brains are optimised. Every element of our organs, our hormone systems all run on these rhythms. The whole body – Lefebvre calls it a bouquet of rhythms – is basically like a busy train station. All the bodily functions are going in and out of the tracks, and if there was no rhythm or timing system, it would just be a big train crash. They've done studies, not so much involving humans, but of animals to see what happens when these rhythms are removed. When you remove the rhythmic genes, they animals die after a few generations. We're inherently embedded in time, – doing things at the right time in a way that makes us human, and that connects us to an environment. It doesn't come out of the blue; it came from this cycle of day and night. This installation is very reminiscent of the circadian rhythm if it was a circle. If you walk this way (at the top of the stairs downwards) it is a half day's rhythm. But if you started from there (at the bottom of the stairs) and walked back, you would get the other side of this day and night cycle.