

In plant life, leaves provide surfaces to capture light from the sun. Photosynthesis transforms the sun's rays into nutrients that allow plants to grow. Growth is a fundamental category in the definition of life, along with locomotion and intelligence – a hierarchy of concepts I've introduced here from the lowest quality to highest – that are inherited from Aristotle in the European tradition of thought. Photosynthesis also plays a significant role in Mattis Kuhn's artwork, *Grasslands for Insects* (2022), which, in a memetic fashion, acts as an organism akin to plant life. Kuhn's work, however, makes a different use of the fading rays of the sun. The potential outcome isn't so much about the beauty of life in terms of the growth of the organism Kuhn has created; it suggests a different idea of growth as a fact of its technological origins: the myth of economic growth and the role techno science plays in its advancement. The complexity of how an organism responds to its environment is an index of intelligence that determines which beings sit at the peak of the hierarchy of life forms. Our ability to sit at the peak of the hierarchy of life forms depends on how we respond to the environmental crisis. If we fail, not only do we die, we prove either a) we are not intelligent (enough) or b) the hierarchy of life forms, inherited from Aristotle, is not true.

What is in conflict, today, is the notion of human intelligence and the hierarchy of life forms that support this concept, because it is clear we are destroying the planet. *And even though we know better*; the actual perception of our ruin isn't making an impact on our response. Input to output, something is amiss. The outside isn't getting into our minds, or it gets stuck there, and we fail to properly act. It is also unclear as to whether techno science is capable of transcending this conflict. Kuhn's work is a subtle and sober response to a rather emotional situation by presenting a profound ambivalence around the promises of AI to solve the problems of sustainability in a hyper-capitalist and technologically-driven economy.

*Grasslands for Insects* stretches along the ground like a vine in a small, geometric space of land that is familiar: an oddly-shaped, sculpted space where a park meets a path and a roadway in downtown Bremen. A solar panel absorbs rays of the sun, distributes the energy along wires that wind their way to LED panels hidden behind a series of what appear to be photographic images of grass. The images are printed on acrylic panels and set within neatly crafted, wooden frames that sit flat on the ground. The LEDs, hidden below the images, add an almost imperceptible glow that allows the images to appear perfectly in tune with the ground upon which the artwork is installed. Without this glow, the images would appear sunken into the earth, they would seem deathly, or perhaps, they would seem to come into presence from a forgettable past. Kuhn's work transforms the sun's rays into nutrients for our speculation on the ongoing health of our planet's ecosystems, by using light in an entropic gambit: if we know we are on a path toward our extinction, is there a beauty in giving over the planet to organisms that will outlive us? Or, can we adapt our processes of urbanization and consider grassland as a possible foundation for interweaving our cityscapes with organic lifeforms?

Upon closer inspection, one notices that the grass depicted in Kuhn's images isn't exactly grass. For instance, the blades of grass weave into one another like threads woven on a loom. It is difficult to see where the blades begin or end, there's an all-over rhythm and movement that is grass-like, but it's not grass. I am reminded, in a very distant manner, of the ebbs and flows of Jackson Pollock's drip paintings. They are painted by lying a canvas horizontally on the ground, so that the artist can defy the common pictorial space of pictures and produce a network of markings that seem to extend forever beyond the bounds of the image. Pollock was seeking a transcendence in his work, an immediacy between his feelings and the resulting accumulation of markings. To put it in technological terms, he wanted the shortest cir-

cuit between input and output. “Technique is just a means of arriving at a statement,” Pollock would repeat on camera or in a recorded interview about his process. The result of the effort was unknown to the artist, it was an expedition into the sublime in painting – or, so it was conceived at the time.

Today, as we face an ecological crisis, the life that may transcend this state of affairs is also unknown, but it is very likely that humans will not be a part of the next chapter. Perhaps human life should consider this the palliative phase of our existence, and that if sustainability seems impossible, or improbable, given that capitalists are loathe to change their current practices, then what might be more realistic is to find a way to gently give in and let entropy take its course to the point where we fade away like the energy from the sun channeled through solar panels. Does this demonstrate an intelligence, if we accept that our previous exploits into modern industrialization, for example, have disrupted the homeostasis of the planet beyond return? To adapt to our demise – is the best we can do? Wouldn’t this mean accepting that we are not intelligent, that we are little better than the dinosaurs? At the level of a species, this would seem to be true.

Looking further at Kuhn’s images, one also notices that there are artefacts that our eyes have been trained to recognize through years of being exposed to compressed, digital images. These artefacts appear in the spaces between more recognizable forms, they arise in those places I, myself a painter, would have difficulty rendering because there are too many layers of tiny, interwoven blades of grass disappearing into, or emerging from, the ground, or perhaps the blades end in tiny points. In any case, it’s too complex to be able to really see the forms precisely. I’m too clever, I have expectations of what should be there, and my eyes move around too quickly to hold the image still long enough to capture it. I want to know what is there with too much excitement – a camera is an empty enough device to capture this kind of complexity and to represent it without judgment.

Photography is the modern tool par excellence because it captures images of the world without judgment – the camera executes what the photographer sets within the frame. Pollock also sought this immediacy in what he called “action painting,” his focus was to be direct in his painting, not to represent his feelings or to judge them, but to capture them as living images, so to speak, in an act of working with paint in all of its qualities. I would like to suggest that the current trend in using AI or machine-learning also seeks to transcend the conflict of human intelligence, described above, in a similar manner. The romantic myth appears in the ability of the machine to take huge amounts of input and to output intelligent results without personal judgment, a pure form of capture and expression, from input to output, if you will, in order to present a step in an organic process, in this case of living matter, rather than a frozen, lifeless image. One could describe this as a pure form of being, a life form that exists continually in a sort of thru-put mode in relation to its environment, and this would fit with the Aristotle’s scheme nicely. But this process isn’t as tidy and stupid as that of the camera’s capture of visual phenomena, which, of course, is the first step of the process for the AI used in Kuhn’s work. The images produced by AI are derived from the input of thousands of photographic images to develop a knowledge-base for a machine to create an infinite number of novel and complex mimetic-images that bear a great resemblance to actual grasslands. Everything about Kuhn’s installation is precise, so it is likely that my expectations are creating an impasse. If he wanted to show *actual grass* precisely, he would have used a camera. The work is leading me to focus my thoughts on the images produced by AI.

The images are *grass-like*. They are not images of grass, they are the product of machine-learning, a complex comparing, analyzing, categorizing and averaging of multiple inputs. While the size of the data set that the machine has learned from is considerably large enough to be

able to recreate something indistinguishable from a photographic representation of grass, the artist has *restrained* the processing of the data set to allow expectations and generalized categories that lose some of the specificities that would allow for a precise capture of a phenomenon. In other words, a limitation on processing the data set enables a production of artefacts – novel forms of abstraction which the artist has chosen to keep as part of the work – that demonstrate different qualities of being that can be found in between the more recognizable forms of grass. This is part of the reason why I am describing the images as being grass-like. (However, one has to wonder whether AI images of grass would always be grass-like by virtue of the process of their production.) Of course, if one sees the artefacts as a hindrance, the ordinary response of a programmer would be to increase the processing of the data set by the algorithm, but doesn't this recreate the same problem we, as finite creatures, encounter with the problem of perfect or infinite knowledge?

The notion of perfect knowledge somehow misses the point. What would we even do with perfect knowledge, if we did possess such a thing? What if we already do, and we're not using it? What would the machine do? The truth of the matter is that data is ongoing and that systems are dynamic and forever changing. If I enter, once again, the laws of thermodynamics, of entropy, our sun is dying. Perhaps the universe is meaningless and indifferent to our survival. Etc.

Dark as these reflections have become, I am thinking of something that seems key to me – human intelligence is able to embrace the potential to not do something. The world is being rapidly consumed in a movement from potential to act, for example, in the form of natural resources that lie dormant in the ground (potential) that are therefore unearthed, developed and consumed (act). A significant part of our knowledge production echoes this movement of potential to act. There needs to be room for other forms of production that leave some things in their state of potential, while on the other hand, there need to be acts that are not the development of potential but are the maintenance of what exists, that make use of what is already at hand. Today's current political problems also suffer this problem of willful actions. Utopia should remain a potential. I am thinking all of the mass political protests of the past decades and their inability to alter the course of neoliberalism and the consolidation of power by a global billionaire class.

What Kuhn's work highlights, for me, lies in this decision to *restrain* the limits of machine-learning and avoid the trap of perfect capture and the fetish of possessing infinite knowledge. The work arises from a middle point in a process of capture (input), perception, reflection and response (output) by presenting the imperfections of the current state of machine-learning from input to output. AI's ability to represent the phenomenon of grassland as a whole is limited to a series of imperfect images of grassland in spaces of uncertain use within the urban environment. Kuhn's images present a novel form of abstraction that is the product of the technology used. The artefacts within the images of Grasslands for Insects reveal a beautiful shortcoming that we could lose if we do not grasp it: let us not develop perfect knowledge for our less-than-perfect intelligence. Let's do what we can with what we have. The situation the artist has created allows us to reflect, to pause and consider what other possibilities exist for working within the in-between and little-used spaces of the urban environment.

I haven't even mentioned insects. They exist in Kuhn's artwork only in name. They represent the greatest other to the human, but without them, our environment will collapse. I will not bring them into actuality in this text. For now, like the artist, I will leave them as potential collaborators in the future, in the hope that with the development of richer grasslands in urban environments their numbers will also return. It's worth a few itchy red bites on the skin to see if it works.