



(Jindrich Heisler, Toyen Nur die Turmfalken
brunzen ruhig auf die zehn Gebote. np (Prague)
Surrealistische Edition 1939.)

INSEcT tiME

Dave Phillips



["phillips - 8\(5\) frogs 1am TS-94 1" by continent on Soundcloud](#)



["phillips - night 09 12 TS-69" by continent on Soundcloud](#)

how would we hear insects if we were insects?

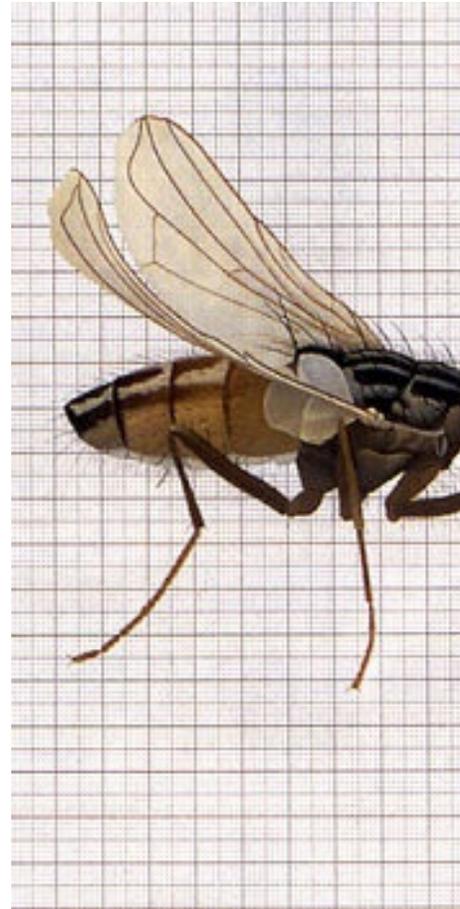
there are (at least) two types of knowledge, but only one you can put into words. and why is it so hard to swat flies?

putting into words the different assumed perceptions of time and environment seem interesting directions into which to take our senses. this effort could be mulled over in technical or biological terms that would probably allow rational and even scientific explanations. and a quick search of the web shows that such ideas have in fact been tested and analysed, for sure enough, plausible interpretations abound, relating to body size, metabolisms, eye-types and vision and the testing frame of "critical flicker fusion frequency". in this

particular test, researchers show animals a rapidly flashing light. if the light flashes quickly enough, animals (and humans) perceive it as a solid, unblinking light. animals that can detect the blinking at higher frequencies are perceiving time at a finer resolution. in other words, movements and events will appear to unfold more slowly to them - think slow-motion bullet dodging in the matrix.

so one of the question's more obvious implications challenges the idea of a time standard. time affects existences in ways that make the one-dimensionality of human-made chronometrical systems feeble to the point of rendering them obsolete. time as it is commonly explained has more to do with economical mind-sets and conditioned value projections than with (our) nature – minutes, hours, days, months, years are merely conventions that enable us to function within other human-made boundaries.

when aspects such as size, age, attention, energy levels, intensity, density, body chemistry, humidity, temperature, strength or weakness, complexity, experience, space, matter or moods (to name but a few) are included a reading of perception, the frailty of chronometry becomes even more apparent - as when time "slows down" in an accident, for instance. the metrical time-count then becomes arbitrary.







(Housefly mutant 'aristopedia', University Zürich (1), Tree bug from Donauwörth, Germany (2), Scorpion Fly near Nuclear Power Plant Leibstadt, Switzerland (3), Soft Bug from Husegg, Entlebuch, Switzerland (4). Illustrations by Cornelia Hesse-Honegger.)

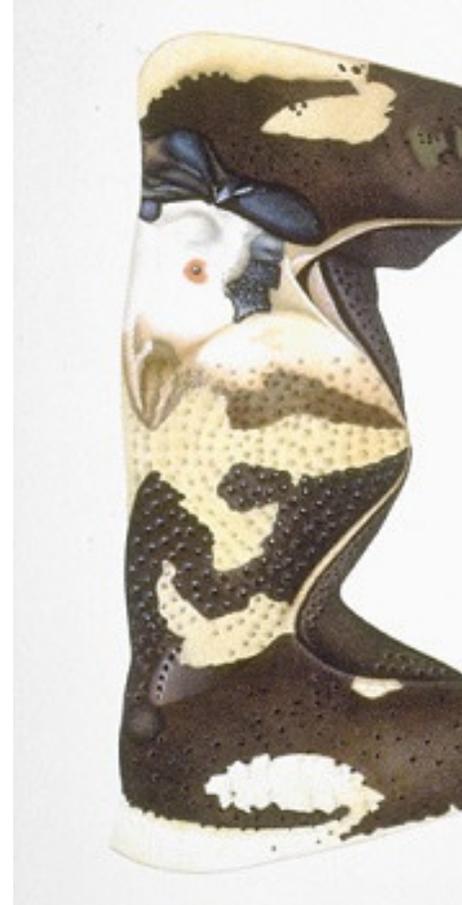
chronometry might be comparable to the reduction that is verbal language, like clutters of gibberish that clot the receptacles yet feign comprehension. though both seem to offer quite the contrary at first and can, in their own self, suggest interesting insights, a distinctive lack of totality and emotional depth is quickly discerned when respective laws or patterns are scrutinised. rational or logical approaches describe similar attempts but in fact merely display a fraction (the tip) of understanding, which happens on different levels simultaneously. if life had but one dimension then logic might even suffice. so what's with our sentience?

regardless of some seemingly undeniable temporal regularities like the sun rising and setting, it still doesn't answer how time is perceived by different

beings. to play with this notion is a rather seductive invitation to expand consciousness, as most of our thinking, as eloquently explained or scientifically and logically sound it may seem, tends to impose a rather systematic approach and an anthropocentric world view. that's just one of our senses talking.

what's interesting about this question is its implications in relation to all our senses, and there are different courses these can go, each worth feeling and all somehow connected.

the way a fly flies or a mouse flits, in relation to the way an elephant moves or a whale glides through water indicates that body size matters. can we extend our senses to experience these things from another creatures (assumed) position (size, felt perception, frequency, location)? can we imagine an alteration of how different nervous systems process sensory information? can we add a synaesthetic association to a visible topology? the subjectivity of time perception can be grounding and self-affirming - a source of great pleasure, or, conversely, able to create a state of disassociation with one's self - a state of transcendence. either way, it would seem an imposition to suggest anything other than that distinct species experience passing time on different scales.



(Tree Bugs from near La Hague, France (1), Tree Bug Larva from La Hague, France (2). Illustration by Cornelia Hesse-Honegger.)

if sound is understood as a language then our perception can be challenged to hear more expansively and to listen differently. human language is structured not so much as a collection of terms, each of which possesses (or should possess) a determinate meaning, but as a complexly ramified web, wherein the knots or terms hold their specific place or meaning only by virtue of their direct and indirect relations to all other terms within the language. however language is a property of the sensuous life-world and not exclusive to humankind. after all, it would be sad to think that nature speaks but we can not or don't know how to listen. it's probably healthy to nurture those senses that cannot be reduced to words. the somnambulistic states the educated populations of alphabetic cultures live in, is a bit overpowering, in this context.

western biologists, behaviourists and natural scientists have only recently started to ascertain that animals have personalities, that individuals within the same animal species have characters that can not be summarised with the usual behavioural descriptions. this for me has always been a departure point. reducing vocalisations of animals to either territorial or mating calls, for example, just doesn't cut it. i wish to see and meet all beings as what they are - individuals.

field recordings of small earthlings, like insects, amphibians and other such sentients, are rich and rewarding material to play this game with. "how would we hear insects if we were insects?" inspired the idea to slow down insect sounds to a "human" level based on assumed calculations. the calculations that lead to this audio are anything but scientific and in fact far from realistic (a human weighing 65 kg and an insect weighing 1 or 2 grams would give us conversion rates of 32500 to 65000 % and audio treated in that way would be largely inaudible) but it also isn't an exercise that is meant to appeal to our ratio. audibility of the treated file was a main argument to find that the slowing down of a sound by 65 to 95 percent seemed to hint toward the imagined direction.

touching tips of melting icecaps.

expanding the hearing of sound beyond individual perception and hearing with different senses possibly taps into some of the essences of life that might shake us and make us aware of the wealth of our environment.

most dimensions are yet to be explored.

www.davephillips.ch







(Squash Bug near Nuclear Power Plant Gösgen, Switzerland (1), Soft Bug from Pripjat, Ukraine (2), Damsel bugs from within Paul Scherrer Institute, Switzerland (3), Ambush Bug from Hill - Hess Road, USA (4). Illustration by Cornelia Hesse-Honegger.)

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"But while the facts of insect-biology suggest so much in regard to the future course of human evolution, do they not also suggest something of largest significance concerning the relation of ethics to cosmic law? Apparently, the highest evolution will not be permitted to creatures capable of what human moral experience has in all areas condemned. Apparently, the highest possible strength is the strength of unselfishness; and power supreme never will be accorded to cruelty or to lust. There may be no gods; but the forces that shape and dissolve all forms of being would seem to be much more exacting than gods. To prove a

"dramatic tendency" in the ways of the stars is not possible; but the cosmic process seems nevertheless to affirm the worth of every human system of ethics fundamentally opposed to human egoism."

— Lafcadio Hearn, "Ants". KWAIDAN: Stories and Studies of Strange Things.

Collaborating with illustrator Cornelia Hesse-Honegger, Dave Phillips released the album "Mutations", composed of field recordings of natural environments that are in a process of transformation. Immersed in some similar ecologies to those Phillips documented, Hesse-Honegger's illustrations — the result of intensive zoological study — depict the mutations of insects from sites of nuclear fallout and military toxicity, including Chernobyl, Ukraine; the nuclear waste and storage facility near the German town of Gundremmingen; the Swiss power plant of Leibstadt, Canton Aargau; the reprocessing plants of La Hague, France; the nuclear fallout area of Pennsylvania's Three Mile Island; and South Vietnam's Cù Chi, a site sprayed with Agent Orange. Together with Phillip's recordings of insects and frogs, Hesse-Honegger's illustrations are an archive of anatomic duration and a narrative that traces the dispersal of a disaster — the unraveling of contaminant traces through the corporeal transformation of ambush bugs, tree bugs and scorpion flies.

The crippling or reimagining of entire species examined by both Phillips and Hesse-Honegger narrates the connectivity between human industries, materials of waste, detritus, and the cyclical nature of matter. *Mutation* is a continuous, unraveling occurrence of form that is already in the midst of becoming a future variation of itself, a little more twisted, or perhaps with an unprecedented resistance to invasive contaminants. A mass of cicadas, a murky yellowing moonlit pond thick with the ringing of frogs, gurgling choirs of bubbling water and creatures, making a fog of their chaotic song, seemingly without beginning or end. This blurring of matter, the falling out of bodies and environments is made visible in its symptoms of leaking heavy metals and chemicals that will, over generations, engorge a head, will twist a limb, will break a wing.

The auditory portraits collected by Phillips suggest that out of the collective resonance of species, we might be capable of hearing this biological trauma, or at least attuning closer to the transformations that sweep through land out of human intervention. A field recording might direct our attention to the aesthetics of sound that otherwise pass unnoticed, but it may also give us insight into the mechanisms that are shifting, shaping sound, changing it even as it reaches our ears and passes out of notice once again. After all, the smallest thing reverberates and shapes the very idea of the space in which it exists.

The significance of this contamination is difficult to measure, especially on living bodies that are much smaller than our human selves, and often seen as less significant. Phillips addresses this with the distortion of time in his field recordings. Time is the gravitas of what condemns disaster — the sense of destructive scale and urgency is measured by the most immediate, visible effects, where disaster is necessarily massive, overwhelming to the human scale. Peter Galison, co-director of the film *Containment*¹¹ — which addresses the plight of nuclear waste storage — emphasizes the necessity to understand time scales that are outside of the human, the terms of which form the horizon between disciplines of thought, geopolitical divisions, or the communicative rifts between entire species. As nuclear fallout from decades past is revealed as having permeated far outside of its exclusionary zones — and just as far and wide inside countless bodies — it is all the more important to read urgency through an understanding of deeper time. This is possible by adjusting the periphery of human presence and action to include the temporal experiences of other beings and things, sensing time as it reaches over planetary scales, as well its significance for the smallest beings on our planet.

Through technical adaptation and force, we may have succeeded at coordinating a human spectrum of time standards, where these determinants are synonymous, if not totally identical. Our human clocks may speak in similar languages, but we exist out of time with other beings. If human time measures are a standard by which we ethically navigate the urgency, scale and response to ecological disaster — how do we extend these ethical measures to encompass those scales that are outside of our own?

— Lital Khaikin



(Tree Bug from within Paul Scherrer Institute, Switzerland (1), Tree Bug from Slavoutich, Ukraine (2), Scentless Plant Bug Environs Paul Scherrer Institute, Switzerland (3). Illustration by Cornelia Hesse-Honegger.)

[1] More on the documentary *Containment*, codirected by Peter Galison and Robb Moss: <http://containmentmovie.com/>