

1385 words

### **What is Insect Media?**

**Insects are a reference of network culture, from talk of hive minds and distributed networks to algorithms that function like ant colonies.**

Jussi Parikka

They are everywhere and they can be perceived as quite the alien intelligence; six-legged, with their numerous eyes, capacities of motion and sensation so different from our own. No wonder science fiction has been inspired by insects. But also other fields, like robotics as well as network design. Insects are more than creepy-crawly bugs; they are also a central reference point of so much of network culture, from talk of hive minds and distributed networks to algorithms that function like ant colonies; some refer to our cognitive capitalist practices as “pollen society”.

It is in this context that I talk of insect media — the entanglement of notions borrowed from biology with high tech technology; understanding media culture through such seemingly simple examples of life which however outperform humans in so many ways. The idea of insect media is then a theoretical as well as a cultural historical exercise to understand the long exchange between discourses of technology and discourses of biology. Science fiction is a good example. If you want to be futuristic, you do not anymore fantasize in terms of humans and animals, or androids and humanoids; instead preferably insects and other non-human animals. This is the lesson one gets even from a glimpse of past years of science-fiction discourse, such as Ian McDonald's *The Dervish House*. The nanotechnological future Istanbul is pitched as the 21<sup>st</sup> century version of the Silk Road node, defined by its booming nanotech cluster of businesses and tech companies. The Cronenbergian 1980s fantasies of human-insect-hybrid (as in the Fly) are superseded by the fiction version of spider robotics and insectoid-drones part of security and surveillance regimes in Istanbul plagued by various suicide sects.

First edition of *Gläserne Bienen* (1957).

It's not that swarms themselves are new. Their history goes back to early twentieth century research into “superorganisms” and the collective mind that for instance ant nests seemed to exhibit. This is the pre-digital version we are being offered now of the internet society: a world of connectivity and emergent intelligence. Indeed, a whole longer history of cultural techniques of swarming is to be considered in relation to the actual technological development in smart robotics. Fiction of Ernst Jünger is again emblematic of a certain epistemological framing of media “development”, as already in his *Gläserne Bienen, The Glass Bees* (1957) he pitched a future of nanorobotics. In Jünger's vision, this was tied to a becoming-obsolescent of the actual animal worlds, which corresponds to the analyses of such writers as Akira Mizuta Lippit concerning the dual bind of modern urban technological landscapes and animals: disappearance of rodents and other non-humans is paralleled by the animalisation of media, which seems to be clear from even a cursory representational analysis of early media, so fascinated by agility of animal bodies as well as animation worlds of rodents and animal farms.

To follow the ideas by Lippit, the intertwining of animals and technology was an inherent part of the modernization and emergence of technical media at the end of the nineteenth century. The disappearance of animals from urban cultures of technical media was paralleled with the appearance of animals in various discourses from media (e.g. cinema) to modern

subjectivity (e.g. psychoanalysis). As Lippit notes, from metonymies of nature animals became embedded in the new industrial environment, where the idioms and histories of numerous technological innovations from the steam engine to quantum mechanics bear the traces of an incorporated animality. James Watt and later Henry Ford, Thomas Edison, Alexander Graham Bell, Walt Disney, and Erwin Schrödinger, among other key figures in the industrial and aesthetic shifts of the late nineteenth and early twentieth centuries, found uses for animal spirits in developing their respective machines, creating in the process a series of fantastic hybrids.

There is a whole media zoology. This term is used in a parallel sense to that of a “zootechnical” approach to elaborate the wider entanglement of communication practices in relation to animal research – and in addition, as we will see below, to a wider media ecological stance. Media zoology refers to this cultural historical situation in which we design and understand high tech media culture through animal worlds.

But of course there is more to this grounding of media zoology than looking at media through its content and what is on the screen. Indeed, the worlds of such fiction as *The Dervish House* remind us that media as technologies – as abstract, yet embodied, as concrete, but massively distributed in wireless and network age – work much more efficiently when they are not modelled on the human form. This is why marine biologists turned US military and security advisors, talking about octopuses make international news. I am referring to the University of Arizona marine ecologist Rafe Sagarin advising on learning about decentralised organisational methods from the tentacle marine creatures. The handbook for such experimental ideas is of course the media philosopher Vilem Flusser’s *Vampyroteuthis Infernalis: A Treatise, with a Report by the Institut Scientifique de Recherche Paranaturaliste*. In terms of media theory, this relates bypassing of some of the traditions of theory of technology from Ernst Kapp to Marshall McLuhan. A lot of them have tried to suggest that we always design media as models of the human and as extensions of Man. Instead, as for instance Siegfried Zielinski has argued too media are much weirder in their relations to the world.

Hence, in this spirit of media archaeology and even media variantology, there is another tradition of media theory that we can excavate. This alternative takes aboard animals in various forms and starts the theoretisation of media from a different set of affordances. Indeed, when talking of media ecology, one should not forget the early writings of Harold Innis, which feature such literally ecological themes as rivers, fur and beavers as well as the more conceptual takes on “medium” that track its history in between biology and technical media. Reading through early ethological and biological literature from 19<sup>th</sup> and early 20<sup>th</sup> century, one discovers a range of attempts to pitch a cross-disciplinary approach to for instance insect lives, which resembles almost an attempt to understand the tiny animals through “cultural” techniques: the life of insects is one of dance, acoustics, communication and housing, as for instance in J.H.Fabre’s *Social Life in the Insect World*. Such dilemmas of methodological and theoretical interest are expressed by William Morton Wheeler, a pioneer in the study of social life of animals and a writer on “emergence” way before it was captured as part of complexity theory. In early 20<sup>th</sup> century, Wheeler lamented the restriction of the notion of the social and its scope: “Unfortunately, also, the science of comparative sociology has remained undeveloped. It has, in fact, fallen between two stools, because the sociologists have left the study of the animal and plant societies to the biologists and the latter have been much less interested in these societies as such than in the structure or individual activities of their members.” What if his willingness to expand social sciences to animal and plant lives could be taken as a further step to suggest the same with our media related investigations? If so many of the early research into animal psychology and formations of the social could be seen, anachronistically, as tongue in cheek mapping of cultural techniques of non-human life, perhaps we can more seriously suggest an extended mediatic approach to animals but also other elements of the non-human ecology – organic and non-organic?

Indeed, we need approaches such as “insect media” that rigourously track the cultural, historical and mediatic contexts in which technological media culture develops. This is even more urgent now, in the midst of the current ecocatastrophe: electronic waste is one of the growing problems, and all of our high tech electronic gadgets carry with them toxic material. Cloud computing demands huge amounts of energy. Media technologies are themselves embedded in ecological consequences, not just animal metaphors. Perhaps ecology and animals are better and more ethical ways to understand technical media culture?

## 什么是昆虫媒体？

昆虫是网络文化的参考，从对蜂群思维和分布式网络的讨论到像蚁群般运作的算法。

Jussi Parikka

它们无处不在，可以被视为是很陌生的智慧；六条腿，许多眼睛，运动和感知能力与我们自己的非常不同。所以说科幻小说受到它们的启发不足为奇。它们也影响着其它领域，比如机器人学和网络设计。昆虫不仅仅是令人毛骨悚然的虫子；它们也是网络文化的核心参考点，从对蜂群思维和分布式网络的讨论到像蚁群般运作的算法；有些适用于被我们称为“花粉社会”的认知资本主义实践。

我正是在这种情况下谈到了昆虫媒体 – 从具有高科技技术的生物学中借来的多种概念的融合；通过这样看似简单的然而在许多方面都胜过人类的生命来理解媒体文化。昆虫媒体的理念便是一个理论的、文化历史的练习，用以了解技术讨论与生物讨论之间长期存在的争论。

科幻小说是个很好的例子。如果你想成为个未来主义者，你不会再对人和动物或机器人和类人生物有幻想，却更会青睐昆虫和其它非人类动物。这是人们从过去几年的科幻小说中得到的领会，比如伊恩麦克唐纳的《托钵僧之屋》（[Ian McDonald's \*The Dervish House\*](#)）。伊斯坦布尔纳米技术未来被看作为二十一世纪丝绸之路的节点，由蓬勃发展的纳米技术集群的企业和科技公司所定义。柯能堡式的（Cronenbergian）1980 年代人类 – 与昆虫杂交的幻想（如在《变蝇人》中）由被各种自杀教派困扰的伊斯坦布尔的安全和监控机构的蜘蛛机器人和类昆虫无人机的小说版本所代替。

## 《玻璃蜜蜂》第一版（1957）

这种群族的概念并不是新提出的。他们的历史可以追溯到 20 世纪初对“超级有机体”的研究，以及类似于蚁穴所呈现出的集体思维。这是我们现在正在遭遇的互联网社会的前数字形式：一个连接和紧急情报无处不在的世界。事实上，智能机器人技术的实际技术发展需要考虑它与更长远的文化技术史的关系。恩斯特荣格（Ernst Jünger）的小说又一次成为媒体“发展”的一些认识论框架的标志，就像他在《玻璃蜜蜂》

（*The Glass Bees*）中所提出的一样，他提出了纳米机器人的未来。在荣格的设想中，这与正在成为过去的真实的动物世界相关联，与作家 [Akira Mizuta Lippit](#) 对现代城市技术景观和动物的双重结合的分析相呼应：啮齿动物和其他非人类的消失与媒

体的动物化并行，这一点似乎还可以从对早期媒体简略的具有代表性的分析中清晰得出，他对动物身体的敏捷性以及啮齿动物和动物庄园的动画世界如此着迷。

沿着 Lippit 的思想来看，动物和技术的交织曾是十九世纪末现代化和技术媒体出现的一个固有的组成部分。动物从技术媒体的城市文化中消失，与媒体（例如电影）到现代主观性（例如精神分析）的各种讨论的出现是并行的。就像 Lippt 所写，在自然的转喻中，动物被植入到新的工业环境 - 从蒸汽机到量子力学的许多技术革新的风格和历史都承载着一种合成的动物性的痕迹。詹姆斯·瓦特（James Watt）和后来的亨利·福特（Henry Ford），托马斯·爱迪生（Thomas Edison），亚历山大·格雷厄姆·贝尔（Alexander Graham Bell），沃尔特·迪斯尼（Walt Disney）和埃尔温·薛定谔（Erwin Schrödinger）以及十九世纪后半叶和二十世纪初的工业和美学转变中的其他关键人物发现了动物精神在开发各自机器中的用途，在这个过程中创造了一系列梦幻般的混合物。

有一整套的媒体动物学。这个术语与“动物技术”的方法是基本一致的，用于阐述与动物研究有关的更广泛的沟通实践中的千丝万缕的联系 - 另外，正如我们将在下面提到的，它也涉及更广泛的媒体生态立场。媒体动物学是指通过动物世界设计和了解高科技媒体文化的这种文化历史情境。

但是，当然除了只通过观看媒体的内容以及其在屏幕上所呈现的以外，它更多是关于扎根媒体动物学的基础。事实上，像《托钵僧之屋》这样的小说的世界提醒我们，媒体作为一种抽象而又具体的技术 - 尽管如此具体，但是在无线和网络时代大量分布 - 当它们不以人为模型时，其工作效率要高得多。这就是为什么海洋生物学家转向做美国军事和安全顾问，谈论章鱼制造国际新闻。我指的是亚利桑那大学海洋生态学家 Rafe Sagarin，建议我们从触角海洋生物那里了解去中心化的组织方式。这种实验观念的指导手册当然是媒体哲学家维兰·弗拉瑟（Vilem Flusser）的作品《来自地狱的吸血鬼章鱼》（*Vampyroteuthis Infernalis A Treatise, with a Report by the Institut Scientifique de Recherche Paranaturaliste*）。在媒体理论方面，这涉及到忽略从 Ernst Kapp 到马歇尔麦克卢汉（Marshall McLuhan）的一些传统技术理论。其中的很多理论试图建议我们始终以人类为模板设计媒体，并将其作为人的延伸。相反，例如西格弗里德·齐林斯基（Siegfried Zielinski）曾经认为，媒体与世界关系会更加奇妙。

因此，本着这种媒体考古学和媒体变体学的精神，还有另一种我们可以挖掘的媒体理论的传统。这种替代性方法带入了各种不同形式的动物，并从不同的可供性中开始了媒体的理论化。事实上，当谈论媒体生态学时，我们不应该忘记哈罗德英尼斯

（Harold Innis）的早期写作，其中包括诸如河流，毛皮和海狸等生态议题，以及对在生物学和技术媒体之间追溯其历史的“媒介”提出了更观念性的阐释。通过阅读十九世纪到二十世纪早期的病理学和生物学文献，我们发现了一系列跨学科的方法尝试，比如昆虫生命，这几乎相当于通过“文化”技术了解微小生命的尝试：就像 J. H. Fabre 的作品《昆虫世界中的社会生活》，昆虫的生命是舞蹈、声学、交流沟通甚至是住行的一部分。威廉·莫顿·惠勒（William Morton Wheeler）的作品里体现了这种方法论和理论兴趣的困境。他是研究动物社会生活的先驱，而且在这方法成为复杂理论之前他的写作就显现出了这一方法。20 世纪初，惠勒表现出了对社会及其范围的概念的遗憾：“不幸的是，比较社会学的学科仍然不发达。事实上，它已两头落空，因为社会学家已经将动物和植物学的研究遗留给生物学家，并且后者对这些社会的兴趣远远低于其成员对结构或个体活动的兴趣。他是否意愿将社会学科扩大到动物和植物生命可以作为对媒体调研的进一步推进呢？如果动物心理学和社会形成的早期

研究可以被不合时宜地看做对非人类生命的文化技术的随意梳理，也许我们可以更认真地提出对动物进行一种拓展的调解方式，也包括非人类生态的基本部分 – 有机和非有机？

事实上，我们需要诸如“昆虫媒体”这样的方式，即细致地追踪技术媒体文化发展的文化，历史和媒介的语境。而现在更加迫切的是，在当前的生态灾难中：电子废物是日益严重的问题之一，我们所有的高科技电子产品都带有有毒物质。云计算也需要大量的能源。媒体技术本身就是嵌入生态的后果，而不仅仅停留在动物的比喻上。或许生态学和动物是更好的、更伦理的方式去了解技术媒体文化？