

**From Open-Source (Bio)Technology to Open Source Appropriate (Bio)Technology:
the role of *Do It Yourself Biology***

“The principal source of injustice in our epoch is political approval for the existence of tools that by their very nature restrict to a very few the liberty to use them in an autonomous way.”

(Ivan Illich, 1973)

This paper explores the role that DIYBio (*Do It Yourself Biology*), a network of bio-hackers which aims to help make biology an open and worthwhile pursuit for amateur biologists and citizen scientists, might play in developing Tailor-Made Biotechnologies. Drawing on personal interviews, observation of the blogosphere and literature review, the article suggests that in spite of the political agnosticism of the bio-hackers movement and of the safety/security threats that it entails, the DIYBio approach is somehow complementary to existing peer production projects in that it blurs the distinction between “hard” and “soft” technologies and it might thus lead to qualify agrobiotechnologies as appropriate technologies. “Open source” is indeed a crucial strategy for resisting the enclosure of knowledge commons but, in a technological age, justice consists not only in equal access to technological outputs but also over equal capacity to autonomously exploit them meeting the boundary conditions faced by local communities. Further spreading of bio-hacking practices and cultures could therefore offer both practical and philosophical contributions for addressing this issue and achieving a democratic commons-based peer production model. On the one hand, availability of low-cost and open equipment, as well as an extreme modularization of biotechnological research, is vital to the existence of “garage biology”. Such a material transformation of R&D processes could open new opportunities for developing countries, altering the contemporary patterns of North/South technology transfer and contributing to re-link technological development with location-specific goals. At a philosophical/sociological level, on the other, DIYBio challenges contemporary concentration of power in the biotechnological field by entailing a radically different way of engaging with science and technology, which is praxis-oriented and builds on information sharing, curiosity and direct action. In doing so, it strongly opposes the self-referentiality of technocratic rationality and simultaneously promotes inclusion of non-specialists and the re-skilling of biotechnological practices.