

*This nowhere gives a tactic mobility, to be sure,
but a mobility that must accept the chance offerings of the
moment and seize on the wing the possibilities that offer
themselves at a given moment.*

—Michel de Certeau

6

The Question of Access

When speaking about bioresistance, the questions of who will be able to do what and how individuals will be able to participate in the movement are crucial. Techno-utopians would have the public believe that biotechnology will follow the example of ICT, meaning that as these technologies are developed, they will become less expensive to manufacture and slowly make their way into affordable common usage. While there is some truth in this belief, there is far more room for skepticism. While we can expect the products of biotechnology to appear as common commodities (pharmaceuticals, food products, home test kits, etc.), the likelihood that individuals will get tools or access to tools that could lead to public empowerment is very low. Even in the case of ICT, the celebratory moment is minimal. Western bureaucratic and technocratic access to

information has improved, as have communication and organizational possibilities at the national and global levels for these demographics. However, a high price has been paid by those who seek these privileges—increased levels of surveillance and work intensification are but two examples. In the case of biotechnology, the public has not been empowered in any way, and the current trajectory of development indicates that that is how conditions will remain.

What can be expected from biotechnology? Certain processes and tasks will become a little more convenient, and out of that, some levels of micro empowerment will occur. In reprotech, for example, less expensive home pregnancy tests should emerge. Tests that provide reliable and early detection are certainly a boon to family planning. Less money will be spent on visits to the doctor (much to insurance companies' delight), and time will not be lost going to clinics for testing. More products like the pill and RU486 could emerge, giving women better control over their reproductive process and sexual practice. Pharmacology and gene therapy will in all likelihood lower the rates of invasive surgery and reduce the occurrence of a small number of inherited illnesses. Biotechnology does offer some desirable advantages; however, the advantages will be extremely costly on both the individual and collective levels (increased environmental pollution and the resurrection of eugenics are just a couple of examples). At the end of the day, the public will not have any more control over medical policy, nor any means by which this new technology could be used for resistant purposes on a general level. The commodity always favors capital, not the consumer.

The Personal Computer and Video

The personal computer is a very interesting case of empowerment as a necessary evil from the perspective of capital. Since capital needed to intensify labor to reduce production costs and thereby expand market possibilities, the worker's body had to be modified to accommodate this requirement. The easiest modification is to extend its capabilities through electro-mechanical technology. The PC was extremely useful to this initiative. Not only did it create a more efficient cyborg, it also created the means by which cyborgs could be networked. The downside for capital is that now the worker has a powerful technology over which s/he has relative control. The device could be used for other tasks besides work. To make the best of a bad situation, this carrot of power was dangled in front of workers so that they would be less resistant to the involuntary transition into becoming work machines—that is, into becoming organic-based labor stations. The next task for capital was to increase the odds that workers would use their free time during which they controlled their information options for activities that best suited its own needs—primarily consumption and training. Even more so than work, these activities cannot be perfectly policed, and in this small remaining slice of time people could use their computers for deviant or resistant activities. More importantly, because of the networking component these activities could occur at a collective level. This possibility is what makes this tremendously oppressive technology simultaneously exist as the most empowering.

Video is well-known for offering hope for technological democratization. Its history of disappointment is well

documented, and in this sense it is slightly more analogous to the trajectory of biotechnology than is the PC. While consumer home studios are possible, and in some classes somewhat common (especially now with video's interconnectedness to computer hardware and software), they have yet to show themselves to be a very strong tool of resistance. At the same time, video's advantage should be acknowledged. It has been useful as a means to create a compelling alternative record of events. Activists can stay in better visual communication, and its use in the courtroom has also saved many from prison by offering counterevidence to the "official story." However, video consistently remains little more than a weak alternative to mainstream media. The problem of distribution has never been solved in spite of the tiny steps made due to streaming media. Mainstream spectacle is still overwhelmingly dominant in the formation of the public record and opinion. The great hope that video would decentralize media practice into more anarchistic zones of contention has not occurred at any point. Video has even less room for subversive intent than the PC, and when one considers its function as an eye of authority in increasingly complex and monumental surveillance and broadcast systems, the potential for the disruptive use of video appears of minor concern to capital.

If the more utopian political aspects of the PC and video were never realized, biotechnology will probably never even have any such aspects on a general collective level, for the simple reason that the means of production will not be given to the public. Biotech will never be offered as a reasonably priced public tool with which individuals and groups may do what they wish (even within legal restric-

tions); rather, they will be offered only readymade products or services for use on a personal level.

Technical Specialization

Having just said that the tools for research and production in biotechnology are not truly available for amateurs, we should make certain qualifications. To be sure, the “free market” allows individuals to purchase most lab supplies and equipment, and many organic materials are available for free or at a low cost. One can even rent a lab (including the necessary labor), so why isn’t the public really empowered? The first reason is the cost factor. Any major piece of equipment costs the equivalent of anywhere from the average person’s annual paycheck all the way to a lifetime of earnings. Part of the reason for the exorbitant cost is that the market for such products is so small. For a complex, specialized piece of equipment, manufacturers would count their blessings to sell 10,000 units. Hence the markup on these near-custom-made products is astronomical, and the possibility of mass manufacture that would lower prices seems very unlikely.

Now let’s say that a mysterious patron has donated the money to an amateur scientist to buy an electron microscope. Now what? Nothing can really be done with it. This piece of equipment is only useful if you have a lab apparatus as a whole in which it is a functioning part. In spite of the fact that a miniature polymerase chain reaction kit can be purchased for approximately 10,000 USD (prices are coming down), it’s pretty much a useless technology unless

plugged into a larger system. Even simple tasks are costly, leaving lab construction and maintenance to capital-saturated institutions.

The problem doesn't stop there; another layer of economic bunkering rests on top of the first two. Labs are also very specialized in their totality. There are no generic labs. Each has a specialized function, and to transform one lab into another type is a complete remodeling job. So once again, let's say that our mystery patron purchases an entire lab for public use. One would need to make very careful choices in this purchase, because after they are made, the lab is functional only within very narrow parameters. For the contestational biologist, this type of material lockdown is not acceptable. In order to respond to the many situations that rapidly emerge in biotechnology, various kinds of labs are required. Since the modular lab does not as yet exist in any practical form, contestational biology can only exist in a nomadic, parasitical form.

Public Resources

This is the saddest part of the question of accessibility. With regard to biotechnology, there are no public resources. Many were fortunate with ICT, because the tools needed to be distributed in order to further corporate models of work and consumption (i.e., capital had to be placed in the hands of the workers). Further, the Internet had to be made available for similar reasons. Mass marketing of the equipment brought down the manufacturing and distribution costs, and opened general access to Internet usage for

free or at an affordable cost for those classes for which it was designed. Certainly, discrepancies in processing speed, bandwidth, and so on will continue to be hot issues in terms of public access, but there is at least an everyday life level of active integration between the public, the technology, and the manufacturers and providers. Biotechnology, on the other hand, has nothing to show for itself. The separation between specialist and nonspecialist (the public) is almost complete, and there seems to be no initiative to construct an intersection in this territory. The complacency exists on both sides. The public is convinced that this specialized area should remain in the ivory tower, and the specialists are happy to stay there.

Even entrepreneurs do not seem to have any interest in finding a way to capitalize on this divide. The appearance of biotech cafes seems to be a very unlikely prospect (except, perhaps, as an ironic one-liner in the art world). This type of commercialization is unlikely not just because it is not cost-effective, and there is no demand for the service, but also because it is beyond the limits of bodily regulations in regard to leisure. Having a cup of coffee next to an transgenic bacteria incubator stretches the codes of leisure to their breaking point.

Nor is it likely that we will see public labs any time in the future. One would think that this could be a reality. The model for this type of public education and access has already been created in public access TV and public access computer centers. Public labs could be of tremendous use for contestational biology both on direct action and cultural fronts. However, technical and knowledge-based specialization rears its ugly head again. Equipment and

personnel would be difficult to get. Sponsorship in general for such initiatives would be hard to acquire, because the fundamental assets are not connected to public markets. Computer companies are willing to sponsor public access facilities because it is a way to reach potential buyers. Scientific equipment manufacturers and distributors do not have this incentive, nor any other.

Finally, there are no popular education outlets for scientific knowledge. The educational structure in both Europe and North America is geared toward the production and improvement of specialists only. Conversely, in the US, computer education has been stratified into many different layers. One can access expert knowledge at a reasonable cost, and classes are offered at almost any level of difficulty. Anything from basic usage to advanced programming can be learned on an *ad hoc* basis. However, when it comes to scientific knowledge and skills, there are no alternatives. So, even if the dream public lab was opened, who would know how to use it? At present, no pedagogical model for amateur science, a necessary component to contestational biology, is available or even under discussion. The whole notion of scientific education would have to be reconstructed in order to accommodate the current need for amateur science on political and cultural fronts.

Essentially, the situation is bleak. The only empowering element available to the public is a reasonable amount of accessible information on current issues from organizations such as Greenpeace. While this is a good first step, it does not help to develop the means for intervention at the level of knowledge and technological production that is needed. Nor does it explain how to appropriate and use

scientific tools as resistant mechanisms that can reinforce resistant political and cultural action.

The Organic and the Synthetic

The final lack of access is due to the very nature of biotechnology. Since its subject is life, it is much more carefully guarded. Life-engineering will not be a public activity, and if we assume the future to be like the past, it will not even be publicly discussed. No better power/capital is available than the control of life configurations (genotypic, phenotypic, ecological systems, etc). How "life" is represented is a cornerstone of identity and cultural mythology. It is the heart of ideology. Consequently, the manifestations of life (bodies) are the locus of authoritarian inscription, discipline, and control. Biotechnology, which falls into this area of authority, is already so well bunkered that it does not even reside in the illusion of democracy, and is openly represented as residing in the realm of benevolent authoritarianism (although the general tendency is for power vectors not to call attention to this characteristic).

A more public example of this general process of creating authoritarian forms of body politics in allegedly democratic zones is in the "war on drugs." When America's first drug czar, Harry Anslinger, first began the war in the 1930s, political structure regarding illicit drugs was still democratic. Proposals and laws regarding drugs had to go through congress at both the federal and state level. When Nixon intensified the war in the late 1960s, his plan was to remove drug policy from the realm of democracy once and for all. Nixon had two reasons for doing this: One, to

appeal to his law-and-order constituency; removal of drug laws from democratic process would allow him to make sweeping, immediate, autocratic changes. Two, he would be able to attack his enemies in the counterculture through lifestyle, since he could not think of a way to jail them simply for dissent. Removing drug policy from the democratic process would allow him to set the penalties. Nixon accomplished this goal through the use of scheduling. A bureaucratic schedule of dangerous drugs was created and connected to felony activity. More drugs could be added as needed. Prior to this initiative, each drug required a specific law. To make marijuana illegal, a specific law was passed; to make LSD illegal, a specific law was passed; to make patent medicines illegal, a specific law was passed. Under these conditions, public intervention was possible. If citizens didn't like the law or thought penalties were unfair or overly repressive, they could try to persuade their representatives to bring their demands to congress. With scheduling, no specific law needed to be passed. Drugs could be added to the list by closed bureaucratic decision.

For the most part, we are in a similar place with biotechnology. Pharmacology and gene therapy are deep in the medical bunker, as are assisted reproductive technologies. In the case of the subject of this book, transgenics, GMOs are completely outside of the democratic process. Corporations have the power to engineer life free of public input. Allegedly, the public is protected, not by elected officials, but by the bureaucrats (of agencies like the EPA or USDA) who decide on whether GMOs should be licensed. Clearly, this is a very thin line of defense. Given this arrangement, corporations have no reason to cooperate by providing public education on biotechnological matters. It is in their

best interests to keep the public misinformed or to say nothing at all, and to maintain judicial territories that forbid amateur entry. For this reason, we cannot rely on the democratic process to make any kind of change. Direct action and cultural resistance is the only option left open. Attempting to access tools and knowledge that are deep in the bunker of bioauthority is perhaps the most difficult task facing resistant culture at present because of the dearth of resources. Whether a popular front can be constructed in matters of transgenics or any other biotechnological issue is still wide open for debate.

Organizing and Accessing

Assuming that a technically armed popular front is not going to emerge any time in the near future, and that DIY is not going to work in this situation, we have to ask how the research necessary to confront imperial powers on the molecular and biochemical levels will be done. CAE knows of no organizational models that have been tried or are under construction in this area of contestation. At present, all the group can offer is personal experience. Happily, our experience leaves some room for optimism. The majority of scientists who are in control of labs are 1960s-generation baby-boomers who still have a sense of political engagement. While many of those we have met are extremely focused on their immediate research tasks, with a little nudge, their former political sensibilities can be reawakened. Others are already concerned, but don't really know what to do or how to do it, and they feel they have no time to think through the nature of their worries. This position is understandable given that

being a principle investigator on a research project is an unbelievably high-pressure, time-consuming job. However, if an alternative project just falls in their laps, often they will take it on as a side project, allow access to their facilities, and/or provide expert knowledge.

CAE has discovered only one way to build a connection, and that is the cold call. Preparations can be made to make your inquiry fairly effective. Go to the websites of local universities. Find out who is working on what. Just by looking at a given scientist's project you can often make a pretty sound determination of who will be sympathetic. Individual email addresses are usually on these sites as well. Write an email, explain your project in diplomatic terms, and explain that you would like to have a meeting if possible. CAE usually starts with asking for aid in an "art" project to scope out the potential for cooperation, because art usually appears fairly innocuous. As we get to know people, we move on to other projects. Trust and friendship have to be built first, then access just naturally follows. CAE also suggests that this process not be done in a cynical manner. Initiatives work better and for longer terms when the relationship is genuine, rather than just being a means to an end. In addition, trust is extremely important, because those who cooperate also need to know that you will protect them by not publicly exposing them in a manner that could jeopardize their funding.

Finally, you have to have amateur knowledge of the language and literature of the specialization of interest. CAE's experience is that the experts are fairly patient, and are happy to act in a pedagogical capacity, but they expect some effort from the learner as well. In all, to do research, you have to do adequate preparation. Often it will be rewarded. The

cooperation rate for CAE has been around 50%—pretty decent odds. Also, once you break the ice, introductions to other sympathetic scientists in different fields is usually just a request away.

For those interested in contestational biology, making these connections and organizing is not a difficult process. Take the matter into your own hands. Do not take the institutional route and wait for some sanctioned opportunity for collaboration to come about. Not only are there very few, but the likelihood that you will get stuck with some person that you cannot work with is high. For example, the history of art and science/engineering collaborations reveal a series of disasters for this reason. Disney and Claes Oldenburg is a classic case study of a failed institutionally sanctioned collaboration. When the corporations agree to do these initiatives, they do it because they want something, and not out of any notion of public good or cooperation. The anarchist words of wisdom here are “work with individuals, not with institutions.”

The location for the agents of bioresistance is in the in-between. To some extent, institutional capital has to be appropriated on the levels of both knowledge, material, and human capital. This is a parasitic enterprise due to the lack of public support systems. DIY is not a viable option nor in most cases is working with an institution; however, nonsanctioned appropriation is available. By locating oneself in the in-between, the liminal, and the infra-thin, the possibility exists that one can create the pressure needed to pry open the bunkers of biotechnology, and in this manner attain public access to initiatives and policy constructions that will affect everyone.