

The uses of obscurity
by Alan Sokal and Jean Bricmont

Alan Sokal
Internet: SOKAL@NYU.EDU
Home telephone: 0171-370-6974

Jean Bricmont
Internet: BRICMONT@FYMA.UCL.AC.BE
Office telephone: +32-10-473277
Office fax: +32-10-472414
Home telephone: +32-2-654-0190

October 23, 1998
Originally intended for *The Observer*,
but never published

Biographical Note

Alan Sokal is professor of physics at New York University.
Jean Bricmont is professor of theoretical physics at the University of Louvain, Belgium. They are authors of *Intellectual Impostures* (Profile Books).

A friend of ours once gushed, after a famous visiting professor's lecture: "X was absolutely brilliant. Of course, I didn't understand a word of what he said."

Sound familiar? To us it does. As for what's going on, there appear to be three possibilities. One is that our friend is an idiot or, more kindly, that he doesn't have the background needed to follow the lecture. Another is that the famous professor is a poor pedagogue. But a third possibility is that the talk was muddle-headed nonsense — or trite platitudes — cleverly disguised in abstruse jargon. How can one tell which is which?

Most scientific fields are, after all, too technical for laypeople to follow; the difficulty is usually genuine. By contrast, charlatans, priests and shamans have for millennia used magic formulae, unknown languages and cabalistic incantations to intimidate their audiences and conceal the irrationality of their discourses. Might similar phenomena take place in contemporary academia? And how can one know?

Obviously it's impossible to give criteria that would allow one to distinguish unerringly between sense and nonsense. But we would like to report an experiment and a small discovery made by one of us (Sokal) and to reflect on them.

The experiment was to submit to a fashionable American cultural-studies journal, *Social Text*, an article with the pompous title "Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity", brimming with absurdities dressed up in fancy scientific and pseudo-scientific jargon. For instance, starting from a (silly) remark by French philosopher Jacques Derrida that "the Einsteinian constant is not a constant, is not a center; it is the very concept of

variability, it is, finally, the concept of the game”, Sokal linked it to the (genuine) “invariance of the Einstein field equation $G_{\mu\nu} = 8\pi GT_{\mu\nu}$ under nonlinear space-time diffeomorphisms” and arrived at the conclusion that “the π of Euclid and the G of Newton, formerly thought to be constant and universal, are now perceived in their ineluctable historicity; and the putative observer becomes fatally de-centered, disconnected from any epistemic link to a space-time point that can no longer be defined by geometry alone.” The rest of the article was in the same vein. And yet, it was accepted and published.

Of course, one ought not conclude too much from that fact alone. All it proves directly is that the editors of one trendy journal felt comfortable publishing an article that they obviously didn’t understand. But what’s more striking — and was insufficiently stressed in the debate that followed — is that they published an article they could not expect their *readers*, nearly all of whom are non-scientists, to understand. This is an example of the deliberate use of obscurity.

The related discovery was made during the writing of the article. Since Sokal was unknown in cultural-studies circles, he gave his article “respectability” by peppering it with quotations from eminent French and American intellectuals concerning the alleged philosophical and social implications of mathematics and physics. The quotes are, in reality, absurd or meaningless, but they are unfortunately authentic. And the authors in question form a veritable pantheon of the “French theory” that’s fashionable nowadays in British and American university departments of literature. When our library research led to the discovery of many more nonsensical quotes, we decided, after some hesitation, to make them public. Our book, *Impostures Intellectuelles*, caused a mi-

nor furore in France when it was published there last autumn.

To illustrate our point, let's give just one example, from the linguist and psychoanalyst Julia Kristeva:

“[I]n the syntactic operations following the mirror stage, the subject is already sure of his uniqueness: his flight towards the ‘point ∞ ’ in the signifying is stopped. One thinks for example of a set C_0 on a usual space \mathbb{R}^3 where for every continuous function F on \mathbb{R}^3 and each integer $n > 0$, the set of points X where $F(X)$ exceeds n is *bounded*, the functions of C_0 tending to 0 when the variable X recedes towards the ‘other scene’. In this topos, the subject placed in C_0 does not reach this ‘center exterior to language’ about which Lacan speaks and where he loses himself as subject, a situation that would translate the relational group that topology calls a *ring*.”

The definition given here of C_0 (a highly technical notion in mathematics referring to a set of functions!) is incorrect, but never mind; the real problem is that the purported application to psychoanalysis is nonsense. How could a “subject” be “placed in C_0 ”? Others of Kristeva's writings invoke the axiom of choice, the generalised continuum hypothesis and Gödel's theorem. She frequently gets the mathematics wrong, but that's a side issue. The main point is that she makes no effort to explain to her non-scientist readers what these concepts mean or why she thinks they are relevant to psychoanalysis or linguistics. This is a clear-cut case of name-dropping.

The dossier is, alas, long: we discovered Lacan lucubrating on topology, Deleuze and Guattari on calculus, Irigaray on logic and fluid mechanics, Latour and Virilio on relativity, Baudrillard on chaos theory and non-Euclidean geometry, Debray and Serres on Gödel's theorem,

Badiou on the continuum hypothesis. These texts are confused at best, meaningless at worst. But, above all, the authors give no indication that they are trying honestly to communicate ideas to their readers. One suspects, rather, that they are seeking to impress their readers with superficial erudition and incomprehensible jargon.

There is a huge difference between discourses that are difficult because of the inherent nature of their subject and those whose vacuity or banality is carefully hidden behind deliberately obscure prose. True, it is not always easy to determine which kind of difficulty one is facing; and authors who are accused of using obscure jargon frequently reply that the natural sciences also use a highly technical language. Nevertheless, it seems to us that there are some criteria that can be used to help distinguish profundity from obfuscation. When the difficulty is genuine, it is usually possible to explain in simple terms what phenomena the theory is examining, what are its main results and what are the strongest arguments in its favour. For example, although neither of us has any training in biology, we are able to follow, at some basic level, developments in that field by reading good popular or semi-popular books. Moreover, if we should want to learn more, there is a well-defined path to follow. And the same is true for serious contributions in sociology or philosophy. By contrast, some obscure discourses give the impression that the reader is being asked to undergo an experience similar to a revelation in order to understand them. One cannot help being reminded of the emperor's new clothes.

Let us emphasize that we are not criticizing the theories of Lacan, Kristeva *et al* as such; that would be far beyond our competence. Nor do our findings show that all their work is nonsense. All we claim

to have proven is that *some* of their work exhibits either intellectual dishonesty or gross incompetence (we don't purport to say which). But that may turn out to be more important than it appears.

When ideas are accepted on the basis of fashion or dogma, they are sensitive to the exposure even of marginal aspects. For example, geological discoveries in the eighteenth and nineteenth centuries showed that the earth is vastly older than the 5000-or-so years recounted in the Bible; and although these findings directly contradicted only a small part of the Bible, they had the indirect effect of undermining its overall credibility as a factual account of history, so that nowadays few people (except in the United States) believe in the Bible in the literal way that most Europeans did only a few centuries ago. Consider, by contrast, Isaac Newton's work: it is estimated that 90% of his writings deal with alchemy or mysticism. But, so what? The rest survives because it is based on solid empirical and rational arguments. Similarly, most of Descartes' physics is false, but some of the philosophical questions he raised are still pertinent today. If the same can be said for the work of our authors, then our findings have only marginal relevance. But if these writers have become international stars primarily for sociological rather than intellectual reasons, and in part because they are masters of language and can impress their audience with a clever abuse of sophisticated terminology — non-scientific as well as scientific — then the revelations contained in our book may indeed have significant repercussions.

The sometimes furious reactions that our book provoked in France reinforce the suspicion that the latter is the case. Few critics bothered to dispute any of our findings — for example, by explaining why the

mathematical terminology used in the quotes served some valid purpose — but were content to attack our alleged intentions (e.g. francophobia) and simple-mindedness. They also used a well-known rhetorical device: to enlarge your opponents' target so as to make them look ridiculous. We were accused of rejecting all metaphors and analogies, all poetic use of language, all transfers of concepts between different fields, and more generally all complex thought. But we are only opposed to mystification, which is quite a different matter. Apparently some people, when told they are being fooled, become more upset at the debunkers than at the charlatans.

Does academic obscurity have consequences beyond the ivory tower? We think it does. As George Orwell noted a half-century ago in his essay “Politics and the English Language”, the main advantage of writing clearly is that your mistakes will be immediately apparent to everyone, including to yourself. By contrast, obfuscation poisons intellectual life and strengthens the facile anti-intellectualism that is already all too widespread in the general public.

We are particularly distressed that these trends are often associated with the academic left. This link is weaker than right-wing ideologues like to claim, but it does exist. It's perhaps not surprising that in periods of political discouragement, such as the present, parts of the left will retreat into mental masturbation. But deliberate obscurity is worse than a waste of time; it is also profoundly inimical to democratic ideals. Democracy presupposes discussion, and discussion presupposes clarity in the communication of ideas.

If intellectuals, particularly those on the left, wish to make a positive contribution to the evolution of society, they can do so above all

by clarifying the prevailing ideas and by demystifying the dominant discourses, not by adding their own mystifications. A mode of thought does not become “critical” simply by attributing that label to itself, but by virtue of its content.

Alan Sokal is professor of physics at New York University. **Jean Bricmont** is professor of theoretical physics at the University of Louvain, Belgium. They are authors of *Intellectual Impostures* (Profile Books).