On the Treatment of Complex Entities

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One

Good Morning.

Now, that we all know why we are here, and why it is we who are here, I shall take the opportunity and make an opening and closing declaration:

Even if it were accurately reported that the general systems theories hitherto have somehow failed in solving the problem posed by the assignment to find successful and desirable treatments of complex entities, I contend that accurate reports are by no means valid arguments for flaws in the Theories, but possibly rather devastating indictments of those complex entities who resented the successful treatment, who preferred the problem to its solution, who simplified themselves enough as to meet desirable change with violent conservatism.

This, if I make some sense, indicates that a flawless theory, and even its flawless implementation, may turn into a mockery of science, intelligence, and good intentions, whenever the implementors overlook that complex entity which they ought to have treated, but did not treat.

The message I intend
I’ll send you in the end.

If, however, I did not make sense, let me briefly try to make it now. I have in the last two sentences generated that ambiguity of judgment which we have to investigate. A story: A team of scientists, technologists, sociologists, psychologists, and workers is formed and appointed to design and to implement the treatment of some complex entity.

The team accepts the assignment and its problems and aims. The team, using its diverse knowledges, experiences, data, and conclusions, arrives at an agreed upon applicable theory and goes on to test it in practice. The test is successful. The team is permitted to implement the treatment. It works. The media are told that the team has accomplished the assigned task. Six weeks later a bunch of strangers invades the successfully treated complex entity and systematically shoots and kills the team, destroys its plans and documentation, and declares the original assignment to have been mishandled. The media are told that the team has failed to accomplish the assigned task.

We now have a choice: We are, according to our traditional and sanctioned syntax, permitted to say that the strangers were criminals, that there is no accounting for tastes and irrational beliefs, that violence will always be the archenemy of thinking people. (Which leaves intact the theory, the treatment, and the existence of criminals.)

Or we can say that a team which, while analyzing the complex entity it is to treat, forgets about strangers who might be criminals, is a negligent team, and ought to have included violence in its treatment in order to secure the longevity of its successful treatment. (Which leaves intact the theory of treatment and the inevitability of violence.)

The outrageously unpleasant third statement we can choose to make is, that there were no criminal strangers at all. That these murderous criminals were, instead and in fact, the systematic implementors of a theory applied to the treatment of complex entities, a theory generated by a team of scientists, technologists, psychologists, sociologists and workers. Which would leave intact the thesis, that a gen-
eral systems theory can not be successfully applied
to the treatment of complex entities unless it is at
the same time a Particular Power Theory.

To many of us this third saying is so offensive,
that we rather condemn the speaker, than look with
intense anguish at the possibility of the speaker’s
stating one of those distasteful truths which we have
learned to call, elegantly, mere trivialities, where the
word “mere” is indeed the treacherous monster.

Trivial indeed, but indeed not merely so: for even
if it is known that many a progress in cybernetics,
operational research, general systems theory, and
other sciences has been made thanks to the eager
support granted by those who see war and violence
as human uses of human beings, as cybernetics ap-
lplied to society, as a necessary and indispensable
treatment of, for them, all too complex entities, even
if this is known, and even if other almost as unpleas-
ant helpful users of scientific ingenuity are known,
and even if such knowledge is so common that stat-
ing it trumpets a triviality, nevertheless and notwith-
standing I contend that that which is known there
is not trivial at all, if only for the suspicion, yes the
fear, of its need for the failure of our work and my
work as well. I am saying, and I am prepared to de-
defend it if asked later today or tomorrow or anytime
after that, I am saying that we are constantly being
helped and supported by those who need both, our
abilities as scientists and as composers and our fail-
ures as problem-solvers and model-inventors.

Two

At least one complex entity has up to now escaped
the systematic analysis and description of thought-
ful and concerned scientists. This complex entity
prefers its problems to their solutions. This com-
plex entity analyzes itself and describes itself in
non-scientific terms, popularizes and loves the lan-
guage of its terms, is ready to defend the terms of
its language to the last drop of blood of most of its
components, devotedly believes in the imitative re-
production of its reality as its moral guidance, and,
thus, knows two treatments only:

1. perpetuation of scarcity for profit,

2. violence for the prevention of successful sol-
lutions of problems.

It is no secret any longer: the scientific treatment
of complex entities has become, even when it tries
to serve and cooperate, the acknowledged enemy
of any violent treatment of complex entities. We
have a problem so non-trivial that we may just as
well say that the problem has us. At last scientists
have been cast in the role of a radical, whether they
like it or not; while Galileo still could choose, today
the choice is preempted: either a scientist or some
power’s stooge. The successful scientist risks be-
ing murdered. The successful stooge risks being a
murderer.

Success, therefore, is so dangerous, frequently
even fatal, that it ought to be counted among the fail-
ures. The above-mentioned complex entity will at-
tack, and with deadly efficiency destroy, only those
implementations of scientifically arrived at solu-
tions of problems which, by public acclaim, jour-
nalistic verbiage, and, worst of all, self-assertion,
threaten and affirm success.

The scientist today, not the stooge, lacks the rep-
utation of harmlessness, universally accorded, un-
fortunately even by scientists, to the composer.

I has to face at most five realities:

1 that which (so I is told (see 2)) happens and
exists with and without humans;

2 that which (so I says) happens and exists only
with and not without humans and tells and
even is the tale of 1;

3 that which is linked to decisions ordained (ac-
cording to 2) by 1;

4 that which is linked to decisions taken by 2;

5 that which I manifests facing 1, 2, 3, 4 and in
which at least three of the five realities com-
pose the expression of a reality between per-
ception and interpretation.

I cannot recognize less than four realities nor dis-
miss more than four.
Good Morning, Ladies and Gentlemen:

To begin with I wish to express my delighted gratitude to our host for the magnificent enormity of the task to which we are invited. We are to respond to this statement: A systems theory which does not see itself as a moving part of the complex entity under treatment fails to adequately present the complex entity and thus fails as a tool for dealing with that complex entity.

Let me put it in another way: Upon receipt of the invitation and the formulation of the subject matter for this meeting I translated all that into a list of questions:

1. Can I conceive of a general systems theory which would help, as an input, to treat any complex entity?
2. Can I conceive of a complex entity devising, as its output, a special systems theory, by which the complex entity could treat itself?
3. Can I conceive of a complex entity containing all special systems theories?
4. Can I conceive of a process by which any complex entity would arrive at an adequate self-presentation, self-description, within which would be nested, dynamically, the theoretical and practical tools for self-treatment?
5. And finally: Can I show that what I can conceive of is also applicable, implementable, feasible?

I know, there are more questions to be asked. but it was at this point that I decided to accept the invitation and the provocation and the challenge. So, while, at first, I was flattered and honored to have been invited in spite of being a composer and not a scientist, I now am here, although I am not a scientist, but because I am a composer. And because I am a composer, I ask you please not to be too hard on me if I do not adhere to scientific method and rigor. (Seeing the list of speakers, I know that ample justice will be done to the strictly scientific aspects.) My competence lies elsewhere and I hope, nevertheless, to make some non-trivial contributions towards a solution of our problems. That I can speak of our problems, I learned mainly from Ross Ashby, Gordon Pask, Heinz von Foerster, Humberto Maturana, and Stafford Beer, through readings, discussions, and, happily, also sometimes in shared projects. I hold them responsible for what they taught me. I alone am responsible for what I learned. And I learned that I can describe my activity as a composer in various ways, depending on the partner to whom I address the description I make. So I find myself delivering different self-descriptions of “Herbert Brün the composer”. There is one for music lovers, one for friendly colleagues, one for journalists, one for my young students, one for the old ones, one for musicologists, one for Who’s Who, and some just for fun and play.

Always I have to explain that composers not only compose music, but also poetry, paintings, theater plays, theories, lectures, and so on, and could be asked to compose in many other media.

I also have composed a version for my scientist friends, not just to impress them, certainly not to sell them my works, but rather in an attempt to show that the scientist and the composer could look at one another with respect, to one another for help, and together at their common or analogue problems. We have to dispel together the popular myth according to which both artists and scientists are elitist egocentric eccentrics, with the scientists being dangerous and the artists being harmless lunatics, who either want to run the world or to disregard it altogether.

I shall read my self-description now; and so that it not be only about Herbert Brün, I’ve called it “Composition”. If you suspect here and there, that I obviously think that there is a composer in many scientists, you are right. If, however, you suspect that I assume a scientist in many composers, you are not yet right.

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composition:

I use the word “composition” whenever I wish to speak of the composer’s activity and the traces left by it. The composer’s activity is motivated by a wish of bringing about that which without the com-
poser and human intent would not happen. In par-
icular, the composer’s activity consists in constructing
contexts, systems, stipulated universes, wherein ob-
jects and statements, selected by the composer, not
only manifest more than their mere existence, but
have a function or value or sense or meaning which
without this construction they would not have.
Occasionally the composer’s activity brings about
that which without the composer and without hu-
man intent could not have happened, leaving traces
which nothing else could have left.
The wish which motivates the composer’s activity
is motivated by an exclusively human property,
which thus exhaustively and sufficiently defines the
term “human”: a “need” which is generated by a
want. Among all biological systems only the hu-
man system contains that self-observing dimension
whence comes, beyond the system’s “need”, the
system’s want to survive. Thence the want, beyond
the “need” of survival, and thus the exclusively hu-
man concept of an intent that would or will retard
decay; in particular the decay of information, the
ordering of a system, any system, stipulated, dis-
covered, or dreamed of.

Let me now try and connect all this to the subject
of our meeting.

Every entity is simple, an object, its name, when
called upon to manifest nothing but its mere exis-
tence. As soon as it is called upon to manifest more
than its mere existence, the entity gains complexity
and is no longer called by its name but by a name
calling its complexity. This name calling, we call,
calling an entity a system. Depending on my call-
ing, the entity will be a remaining object, or show a
varying system. No entity can do anything against
my calling upon it to manifest nothing but its mere
existence, except, maybe manifest its non-existence.
Every entity, however, can respond in various ways,
when I call it a system. Not only will it immediately
turn into a complex entity, but even begin, under my
very eyes, to show me, what it thinks of me, of my
calling, of my tone of calling, but in particular, what
it thinks of the system I called it. I can relax and
start treatment if the entity thinks it is the system I
called it. And if it thinks that it is not the system I
called it, and shows me that, I can apologize and try
again with a new call. But what am I to do, if the en-
tity, which I have awakened to its complexity, now
loves my calling it a system which it thinks it isn’t,
or hates my calling it the system which it thinks it
is?

By analogy and in a different metaphor I can il-
strate this set of alternatives. Thus:

I have been invited to come to Barcelona, where
I am to meet with people, who for various reasons
are concerned with the treatment of complex enti-
ties. There is in Barcelona a simple entity, people,
which refuses to be an object and therefore wants
something: at least to manifest more than its mere
existence, at most to hold a conference discussing
the treatment of complex entities in general. So I
describe you to myself as a particular case of a com-
plex entity, a system to which I am to be an input,
as I was asked to speak to you. And I say: I am
to treat this complex entity by way of thought and
language. I am to speak to this group of interested
people about the given theme. And so I prepare my-
self for you.

First case: You are interested in the theme, and
you find that I indeed am speaking about it to you.
I have not misrepresented you, the complex entity,
to myself, and so my talking, the treatment, has at
least a chance to be the intended input to the system.

Second Case: You are not at all interested in the
theme, but you find me speaking about it. “Mr.
Brün!” you say, “we came here to learn about draw-
ing caricatures of talking professors, and you speak
all the time about complex entities. What hap-
pened?” So here I had you misrepresented to me
and had chosen an inappropriate treatment. There
are, however, three easy solutions: I simply apol-
gize and shut up and leave. Or I say “Well, why
don’t you just look and learn, while I continue talk-
ing?” If you agree to that, then my treatment has
the best chance to be an unintended input to the sys-
tem. Or I quickly change my script, and begin to
show how also caricature is a treatment of complex
entities. This is where the mutual treatment of two

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misrepresented complex entities results in a change of treatment and a new mutual calling.

Third case: Which is, of course, a clearly intolerable imposition. Yet, please try and try hard and envisage a scenario, unbelievable, and still not impossible:

You seem to be interested in the theme. I seem to speak about it, and propose to explore the potential of the democratic process as a treatment of human communities, complex entities. As long as I talk to you as if you think of yourselves as democrats (which you do not) you approve of my sentences, applaud my statements. When, however, I then gradually move toward talking to you, as if you think of yourselves as friends of right-wing radicals (which you do), and gradually expose your plans of exploiting the democratic process for ushering in fascism by majority vote—you’ll noisily dislike me. I call you what you are not and you smile; and you curse me when I call you what you are.

There, better be soon some better cases! In the meantime we are constantly treated by atrociously simple entities spruced up in faked complexity to better puzzle the gullible.

What to do!! What to do!? What to do!!