MUSIC

REVOLUTION EVOLUTION AND ROCK'N ROLL AN E CLUSIVE INTERVIEW WITH PLASMATICS FOUNDER ROD SWENSON

By Jason Webber

Her fans called her "WOW."

It was the perfect nickname for Plasmatics frontwoman Wendy O. Williams, since it was not only her initials, but what else could you really say about this woman? After all, this was the singer, and the band, that for one solid decade, led a musical revolution. Here was a muscular, mohawked woman, often armed with a sledgehammer or chainsaw, gleefully destroying television sets and automobiles, those beloved symbols of American middle class complacency, while simultaneously belting out some of the heaviest, most confrontational songs in the history of rock. This wasn't entertainment; this was warfare. And the general of this full-frontal jihad on consumerism and apathy was Mr. Rod Swenson.

Swenson, a Yale graduate, assembled the Plasmatics project in the late 70s after meeting fellow nonconformist Wendy Orlean Williams. From the very beginning, the Plasmatics set themselves apart from their CBGB's cohorts, bringing a rabid, snarling ferocity that scared even the most jaded audience member. Swenson had already made a name for himself in the New York artist community by filming CBGB acts and operating the notorious Captain Kink's Theatre, an anti-establishment stage company that made a name for itself back when Times Square didn't resemble an outlet mall. Wendy, just off the bus in New York City, saw an ad for Captain Kink's, went in, met Swenson, and thus began one of the most explosive stories in rock

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history. Swenson and Williams maintained a professional and personal relationship for 22 years, right up until her suicide in 1998.

Yet, even during the ten years that the Plasmatics were rubbing America's nose in its own consumerist refuse, Swenson seldom gave interviews or discussed his ideas with journalists. He largely left that to Williams, who provided some of the most memorable interviews, music videos, and talk-show moments of the 80s; particularly her appearances on *The Sally Jesse Raphael Show* and *The Joan Rivers Show.*

Today, Swenson is a somewhat reclusive figure and almost never discusses his Plasmatics past. In accordance with his lifelong passion for science, Swenson is currently a fellow at the University of Connecticut's Center for the Ecological Study of Perception and Action, and has been published in several scientific journals for his research on the laws of evolution, thermodynamics, and entropy (several of Swenson's scientific publications can be found **here**.)

VICE reached out to Swenson earlier this year, asking if he would be willing to discuss the Plasmatics, and the impetus behind the band's creation. It took a while to convince him to participate, but Swenson finally agreed to take a rare look back at the history of the Plasmatics. Since Swenson is an extremely busy and private person, we emailed him a few questions and asked him to respond at his convenience. This is the first interview Swenson has done on the Plasmatics in more than 20 years, and he insisted that we run the entire thing (all 9,000 words of it) un-edited. So here goes.

VICE: At what age did you become interested in evolutionary theory and when did you realize that Darwin's basic premise of natural selection was incomplete?

Rod Swenson: Well, I think I was always interested in it, but didn't know it, at least in a formal sense, until later. The way the subject was, and I think mostly still is, presented in school, was not very engaging to me. But if you understand as the Heracliteans did two and half millenia ago that "you never step in the same river twice," meaning that we live in a world of change, or a "becoming" rather than a static world of "being" (as the

philosophical rival school the Parmenideans or Eleatics held) then you realize that not just every one of us humans, but, in fact, every epistemic or cognizing thing, every living thing, in its moment to moment (with moments defined over multiple scales) enterprise of navigating this world of change, is, although perhaps typically unconsciously, an evolutionary theorist. Each has, in effect, an “evolutionary theory," or worldview, relationally embodied in its own becoming by which it goes about its activities in the “river” of flow that constitutes our world.

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As to when I realized the insufficiency of natural selection, or orthodox Darwinian theory to provide a robust ground for a deep and meaningful evolutionary theory, I would say it started creeping up on me about 40 years ago and by somewhere around 35 years ago became vividly clear. So if one knows my bio at all, summarizing very superficially, I had gone from Art with a capital “A” to conceptual art, and or street art, to art with a lower case “a,” or doing things that were intentionally not contextualized as art at all, that took me from the food industry to music and so on. The remarkable thing was that I came to identify certain invariant properties, or what general system theorists used to call “isomorphies,” that held or governed the system properties of all these systems regardless of the kinds of components that constituted them. More remarkably, at least to me at the time, it was clear that these systems, once initialized, had a life of their own, and that the very general kinds of developmental (or call these evolutionary) changes they would go through were roughly predictable or the same.

But now this started to keep me up at night. This, which seemed to me some kind of deeper reality than we are normally taught about, or certainly that finds its way into colloquial or popular discourse, became a pre-occupation for me. Modern science, descending from Cartesian metaphysics, has been built almost entirely on, or reduced to, what Aristotle called “efficient," or proximate cause, and what we’re talking about here, to use terms now more widely known, “self-organizing," “spontaneously ordering," or more technically “autocatakinetic” (ACK) systems are not reducible to efficient cause. Since autocatakinesis is found from non-living through cultural systems where natural selection as an explanatory framework does not work it became clear to me that natural selection was insufficient as an explanatory first principle for a general theory of evolution.

In your published papers, you talk about how this idea of self-organization that goes beyond natural selection to address some of the major problems in evolution (self-organization being one of the main catalysts for evolution and not just natural selection). Can you explain this in layman's terms?
Excellent question and certainly worth a try, but I must point out two things that make this challenging. First, I can’t do it strictly in layman’s terms because I will have to introduce terms, which necessarily go beyond what I think would be taken as a layman’s conceptual space. The other point is simply the lack of space. Even addressing the terms and issues in a somewhat thorough way is beyond what we have here. But, having said that, I will try to give at least a fast and dirty sketch of some of the key points and issues, and then furnish some selected references (see below) so interested readers can get greater depth if they want. In addition to natural selection, and self-organization, our sketch will have to include some key ideas in thermodynamics, entropy, and show how the the old idea, still held in many quarters, that physical law predicts that the world should be collapsing monotonically into disorder has now been turned on its head.
First then, reviewing the problem with the idea that natural selection explains evolution: “Evolution” to the Darwinian theorist, in fact, is literally that which follows from natural selection, and natural selection is entailed by what Popper called a “situational logic." Namely, if certain conditions hold, then natural selection will necessarily follow, and those conditions are i) heritable variation; ii) finite resources or constraints on resources (the finite dimensions of space-time); and iii) the “fecundity principle," a biological extremum that refers to the active striving of living things to, in Darwin’s terms, “fill out the economy of nature." Natural selection, Darwin wrote, follows from the competition between members of a population of replicating or reproducing entities “striving to seize on every unoccupied or less occupied space in the economy of nature.”

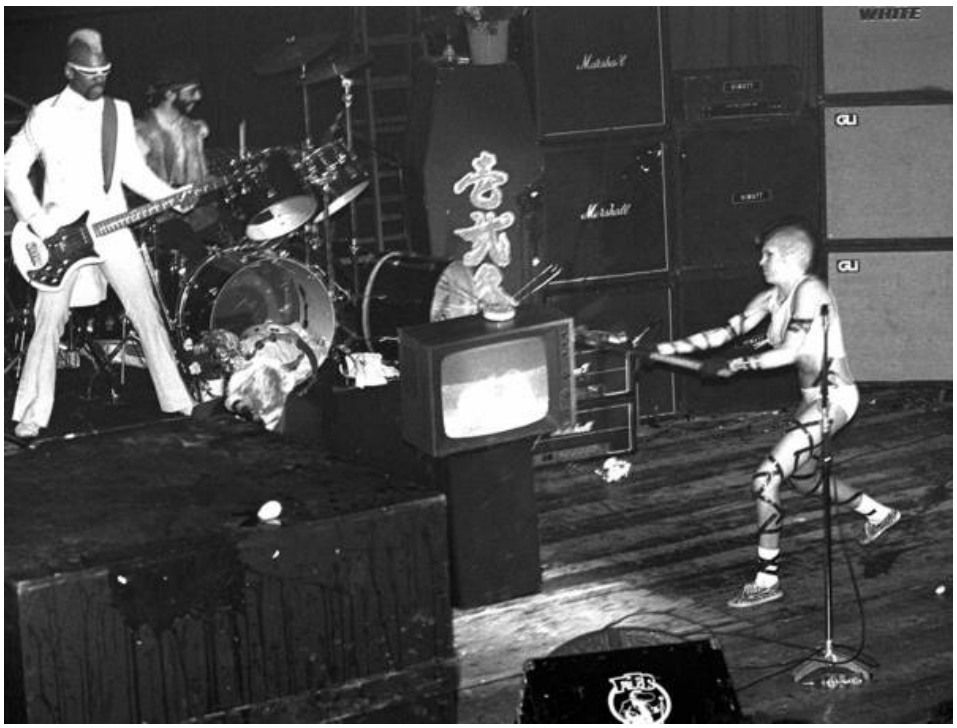
OK fine. Good logic, tight mechanism, and clearly operable, but where does this leave us? Remarkably, for starters, it puts the central thing an evolutionary theory should explain logically outside the reach of Darwinian evolutionary theory. In particular, by assuming the fecundity principle, or the intentional (meaning end-directed behavior dependent on meaning), active striving of living things to begin with, an explanation of the active striving of living things or the fecundity principle, is by definition outside the explanatory framework of the theory. The theory assumes in advance what it should otherwise explain. In Darwinian theory it is all smuggled in with an "infinitely improbably event that only had to happen once" (the origin of life). At the root of this idea of "infinite improbability" sits the idea of the second law of thermodynamics (the "entropy law") as a "law of disorder" that followed from Boltzmann's assertion, in his attempt to reduce the second law of thermodynamics (the "entropy law") to a stochastic collision function, that transitions from disorder to order in general were "infinitely improbable." Beginning with this idea of the incommensurability between biology and physics, Darwinian theorists opined, nevertheless, that since the Earth was billions of years old and life was, until not too long ago, thought to have emerged not far before the Cambrian (600 million years ago), that there was enough time for such a nearly impossible thing to happen.

Setting aside the universalities I mentioned briefly in answer to your first question, not many decades ago some glaring anomalies began to appear for Darwinian theory. In particular, by the early 1980s, a confluence of discoveries and insights from biogeochemistry, paleobiology and other disciplines had demonstrated a number of things showed that life or "replicative ordering" did not arise on Earth after billions of years but virtually as soon as the Earth cooled enough after its formation to prevent the oceans from evaporating. In addition, it was shown that the present oxygen rich atmosphere on which the evolution of virtually all higher-ordered (or multicellular) life forms (from single-celled eukaryotes to the hypertrophied encephalization of the human brain and the rise of civilizations) depended was put there and maintained by life itself operating as a single planetary system over evolutionary time. In short, all the evolutionary objects of classical Darwinian theory, and more, were dependent, as component systems, on the prior existence and continued persistence of this larger planetary system as the principle unit of evolutionary study.

Evolution "on" Earth needed revising to evolution "of" Earth now. But such an evolutionary unit does not fit within the terms or observables of Darwinian theory. According to Darwinian theory the Earth cannot evolve because evolution, as that which follows from natural selection, is defined as the consequence of a competing population of reproducing or replicating entities, or a population of many while the Earth system is a population of one. This "problem of the population of one", the inescapability of which is confirmed with every breath each of us takes, is found not only at the planetary level, but in from the origin of life (which arose as a population of one) to the rise of civilizations, and more generally in ecosystem succession at every level.

All these systems are flow structures that pull resources into themselves in their own self-production through the coordinated motion of their components with a set of empirically traceable circular relations. They are all self-organizing or ACK systems. The circularly causal relations that constitutes them exist through the dissipation of environmental potentials (or energy gradients) where output feeds back on input to amplify growth from the initial instabilities where they originate. The macrostructure (what we call the "thing") at one level is constituted by the flux of the lower level components. Dust devils, and tornadoes are non-living examples which make this easy to visualize where can see literally as they come into being that the origin, evolution (or development) of ACK systems, the transformation of some previously less ordered or incoherent set of components into a dynamically ordered or coherent set is inherently a process of selection. As the system appears, emerges, develops and grows (or evolves) we see some number of smaller microstates or degrees of freedom selected from a larger initial set.

Self-organization, or ACK, thus entails selection, and wherever natural selection is seen to occur it is internal to an ACK system. Natural selection is a special case (a particular case) that occurs when an ACK system has replicating components. Malthusian closure, in different terms, is the kind of ACK closure that occurs during the development or self-organization of a system where there is component replication. This understanding, that evolution is a process of self-organization or ACK situates the situational logic of natural selection Popper talked about to show the relationship of physics, biology and cultural evolution as part of a single universal process. But there is one crucial piece missing. We have identified the dynamics but we are still up against the old problem of the entropy law (the second law of thermodynamics) as telling us that the world should be going progressively to more disordered states not what we see in the formation of every ACK system, which is a transition from less to dramatically more ordered states, or in the evolutionary record writ large which from prokaryotes (bacteria) at the origin of life to the explosive globalization of human cultural systems today shows the opportunistic and progressive production of increasingly more highly ordered states.



We can now explain this crucial piece. So, reviewing quickly, let's start with the fact that the second law as classically stated says nothing about the transformation from disordered to ordered states being "infinitely improbable." This claim was made later by Boltzmann as part of his attempt to reduce the second law to a stochastic collision function. The classical statements of the second law due to Clausius and Thomson following the work of Carnot was about the reduction (or minimization) of the "availability," as Carnot called it, or "potential" of energy to do work that happens with every natural process. It is actually quite simple and intuitively easy to understand.

Carnot noticed it was the "fall" of heat from higher to lower temperatures that drove a steam engine just as it was the fall of water from higher to lower that drove a mill wheel. Wherever energy is out of equilibrium, such a potential (or gradient) exists that nature acts to minimize. The total energy is conserved (this is the first law) but its "potential" to produce change is net reduced. Clausius coined the word "entropy" to refer to this dissipated potential, and the second law thus says that wherever a nonequilibrium distribution of energy exists (a gradient or potential) natural acts spontaneously to minimize it or equivalently to maximize the entropy. If we put a cup of hot tea in a room with a cooler temperature we all know the cup/room system will produce a flow of heat from the cup to the room until the temperatures are equal. The entropy is thus maximized (or potential minimized).

But whereas this says nothing specifically about disorder, the spontaneous production of ACK states that we see ubiquitously in the visible world and as the hallmark of evolution is still a problem because with the emergence and development of an ACK system we have the movement increasingly away from equilibrium producing an internal potential carried in the circular relations that define and works back to amplify and maintain it. A major puzzle thus still remains. The first clue towards resolution of the problem is the realization that since what the second law does irrefutably say is that in all natural processes the net entropy must increase. Thus if an ACK system is defined by a reduction of internal entropy (has an internal potential and is dynamically ordered) then it must be producing an amount entropy equal to the amount of its own internal ordering or potential. In other words whenever an ACK system comes into existence the net rate of entropy production of the system as a whole (the ACK plus environment system) must increase by a concomitant amount; it must increase dramatically.

This latter has to be the case else the second law would be violated and no one has ever been able to violate

the second law. It is also easily demonstrated in simple physical experiments such as the classic Benard cell experiment where spontaneous order arises in a viscous fluid as soon as the temperature gradient (or potential) reaches a minimal threshold and the entropy production, or transport of heat from source to sink dramatically increases with the origin of the cells. This puts us face to face with the law of maximum entropy production (LMEP, or “EL MEP”) the universal principle that solves the puzzle of why rather than being “infinitely improbable” spontaneous ordering (self-organization of ACK) occurs opportunistically as soon as it gets the chance, and why it is the defining diagnostic property of the visible world as we see it from the dawn of evolution and its expression in the “fecundity principle” to the explosive cultural ordering going on today.

In short, the second law says potentials are minimized (entropy maximized) in all natural processes but says nothing about rates or path selection. LMEP (or fourth law of thermodynamics) to the contrary answers the crucial question “which path out of available paths will a system take” to minimize the potential or get to equilibrium. It says: “A system will select the path or assembly of paths out of available paths that minimizes the potential (or maximizes the entropy) at the fastest rate given the constraints." The puzzle is no longer a puzzle. With this we understand the underlying physical basis for the fecundity principle, natural selection, and self-organization, why order is selected or from disorder not infinitely improbably but opportunistically with a probability of one as soon as minimal conditions are met, why life emerged on Earth as soon as temperature cooled sufficiently to keep the oceans from evaporating, why higher-ordered life forms arose as soon as minimal levels of oxygen were in place, why major civilizations arose when they did and so on. The short answer to your question then is: ACK-LMEP.

You have always been interested in confrontational art. Can you explain the relationship between art and your theories on evolution?
Art who?

You earned a Master's of Fine Arts degree from Yale, and according to biographies on the Plasmatics, you met Wendy when you were running a Times Square show called Captain Kink's Sex Fantasy Theater. What was the idea behind the Captain Kink project?
I was looking for a place to produce experimental theater with a repertory company, and at the time before the Disneyfication or “cleaning up” of Times Square it was a section of town for doing outlier kinds of things. It was seedy, honky tonk, fairly dangerous late at night, but loaded with energy, character, and grit, all of which have now been eliminated in favor of corporate, mass produced vacuity. There were a lot of old burlesque theatres around that had well run their course and were sitting empty most of the time, so and I made a deal with the owners of one to front me their theatre for a percentage of the ticket sales after the basic overhead was reached, which they agreed to cover. It was way off Broadway, although only a few long blocks away and I don’t think there was anything much like it before, or after, actually. The deal started on a week by week basis, but soon drew solid crowds and I did shows there, in fact taking over a second theatre for a spell for a little over a year and a half.

The format was short fast-paced vignettes, typically intentionally absurd and comedic, often with erotic themes, each running for about 20 minutes each for a total show of about an hour and half backed with a lot of (then) cutting edge music. It was a lab of sorts, and each week we launched a new show on Monday. It seated about 150 people and we ended up running five shows a day beginning at lunchtime seven days a week. The new show for each week had to be written by and then blocked and run-through Sunday night after the theatre closed at midnight to be ready to open for the early matinee on Monday so Sunday nights the whole time I did shows there we never slept. We never sold advance tickets and there was always a line for our opening show on Monday and many other shows typically sold out. It was kind of a small cultural hub, and it was at the same

time that I was simultaneously involved in the underground rock scene with a lot of traffic between CBGB's and Captain Kink's with various performers from CB's coming to shows at Captain Kink's and also working there part time on the technical crew doing lighting or helping with props etc. It was a real energy charged environment.

It was at that time that I was producing/directing videos of then widely unknown groups like the Ramones, Blondie, the Dead Boys, and others, and I think was the first to put on a show with Patti Smith in an actual theater-sized venue in New York larger than CBGB's (the then Elgin Theatre in Chelsea, which I also took over briefly). By then though, by late 1977 I was working with Wendy on the The Plasmatics and pretty soon, as that took off, and for the better part of the next ten years, that took almost all my time and attention.

What was it about Wendy that made you realize she would be a worthy partner on your projects?
Isn't that completely obvious? She was an absolute one of a kind.
Some music journalists have described your role to Wendy as that of a Svengali. Do you resent that label?
"Some journalists," whoever it is you're talking about, if you want to call them that, have said all kinds of ridiculous things. Among them that would certainly be close to the top of the list for ridiculousness. As any number of actual journalists have pointed out, Wendy, with the great courage she had, broke all kinds of stereotypes and so various establishment types found her threatening. I would say a remark like that, implicitly kind of old-school sexist, would be from someone in that category. Maria Raha, and some others, make some good points on the "rockumentary" done on the band ("Ten Years of Revolutionary Rock and Roll") about how threatening the establishment found Wendy at the time.

From the beginning, The Plasmatics set themselves apart by being even more hardcore than the rest of the bands that were coming out of CBGB's at the time. Do you think people got the message behind the destruction of the cars, television sets and guitars or do you think the point was missed at the time?
Well, when you say did "people get the message," well, of course some did and some didn't. One of the things about us humans is our ability to not see what is right in front of us. We literally bracket things out. One of the phrases we memorialized on one of our tour T-Shirts was from a message that was edited in backwards at the end of one of our albums so you had to, in the days of turntables, spin the album backwards manually to understand it. It said "the brainwashed do not know they are brainwashed." Wendy, during the first several years of her career was called "the Queen of Punk Rock." later as we mixed (to the horror of some our early fans) punk and metal various magazines started calling her the "High Priestess of Metal," but she was also called the "Queen of Shock Rock." Part of the assault on conformity and what we saw as blind worshipping of consumerism was shocking to people indoctrinated into it. People found it shocking to see and people respond to shock in different ways. Shock can move people from one place to another in a very good way, but others people become consciously or unconsciously defensive, and denial is one form of it. In this case, they don't see it.

You used the pseudonym Butch Star throughout most of the tenure of the Plasmatics. Why didn't you use your real name?
I think there were a number or reasons, but it should be pointed out that "Butch Star" was only one of the names I used then, although one of the more well-known ones. I shot all the album covers as well as a lot of the promo stills and did most of the album art under the name Butch Star. I also wrote the lyrics to the Wendy O./Plasmatics songs, and initially I used "Stellar Axeman" for that. I use some others, some of them one-offs such as "Big Bull Dozer" for some other functions. My name, it should be pointed out, was almost always used say on albums under the heading: "Concept and Management: Rod Swenson." Among the reasons that I started doing it was simply so that the well-deserved attention would go to Wendy. Yes, I did all these things, but she was the star, it was built with and around her. It was also kind of part of the inside stuff that people who really knew something about the band knew but the average off the street person didn't. The names themselves are, I hope you see though, completely tongue in cheek to begin with, although we would often get calls at the office from labels or others wanted to know how to get a hold of Butch Star to hire to do a shoot or do some art

work for them.

Which Plasmatics or Wendy O. Williams album do you think best captures your ideas on evolution and art?

None of them are attempts at evolutionary theory per se, so none of them really express my ideas on evolution (as theory). Many of them express views about the world which I would mostly still subscribe to today and are now intelligible to me in terms of evolutionary theory but none of them were about evolutionary theory per se. My ideas on evolution were certainly crystalizing during this whole time. I was working on them as we travelled and you can see for example explicit thermodynamic references in the characters names in the “Maggots” album, for example “Dr. Boltzmann” and “Dr. Carnot," but while the album is about global environmental collapse following the mutating of retroviruses unleashed in polluted waters in an attempt to clean it up and in the context of flooding due to polar icecap melting from global warming and the greenhouse effect, it was not about evolutionary theory per se. Of course, the science in it too is OTT allegorical. The idea of the collapse of Western civilization as the result of hungry maggots that grow to the size of football fields, I hope I don’t have to point out, is physically impossible in a literal realistic sense. The laws of allometry don’t allow such things to happen, or King Kong, or Godzilla, etc. As to the art part of the question, all the albums have a place, although there are some that I like better for some things than others. Musically and conceptually we moved through a lot of territory in the decade Wendy and the Plasmatics flourished.

Did Wendy tell you she was planning on taking her own life? If not, were you angry with her for choosing to end her life?

Yes, she did tell me. I spent the better part of four years trying to dissuade her, or at least postpone it. Anger, in any case for someone who takes this ultimate step, is not something I would readily understand. Utterly deep and inexpressible grief and loss. But anger no. I will tell you that while she was here she lived with an authenticity that few can rival, and this, I think was a goal in life she set with a determination at a young age. Despite remarkable hurdles, I believe she achieved this goal. Her work and her legacy speaks for itself.

By Jason Webber | 5 days ago

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