

ART BYTE
BYTE ART BYTE
ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE
BYTE ART BYTE
ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE
BYTE ART BYTE
ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART
ART BYTE ART
BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART BYTE ART
ART BYTE ART

The Magazine of Digital Arts

April - May 1998

Vol.1 No.1

\$6.50

From Bone to Byte

by Thomas McEvilley

Michael Rees's 3D Thoughts

Peter Campus's Monitored Worlds



Michael Rees like his Yale classmates Michael Grey and Matthew Barney, is an artist who came quickly to prominence. Yet, after acclaimed gallery exhibitions at 303 Gallery and Basillico Fine Arts, and an appearance in the 1995 Whitney Biennial, Rees returned to his native Kansas City to teach and concentrate on his work, away from the ego and career battles in New York. The change of place offered new technological horizons that allowed Rees to develop ideas into forms he had only imagined. His most recent exhibition was at the Kemper Museum of Contemporary Art and Design in Kansas City, November 22-January 25, 1998. Later this year he will exhibit new work at Central Fine Arts in New York.

Bill Jones Give me a little background on your use of 3-D print technologies.

Michael Rees About 3-1/2 years ago I had an opportunity to teach at The Kansas City Art Institute, and they said, "Do you want to learn about computers?" I was hesitant at first, and then I thought, what the hell, it'll take two weeks out of my life.

Immediately I started to gravitate toward the 3-D program. I had heard about stereolithography in 1987, but I always assumed it was beyond my resources. Using 3-D was really an eye opener, because I realized that what you see is what you get (also known as "wysiwig". If you can imagine it and describe it in the CAD program, you've got an object. I think maybe 15 years ago this would have been called conceptual. In some sense it's as close to a thought as my work has ever been, though it has always had an intuitive and vaguely surrealist edge.

BJ I understand that you've been working with a new technology called 3-D printing at Z Corporation in Somerville, Massachusetts.

MR What's interesting to me about all of the rp [rapid prototyping] technologies is that they fabricate additively. That's what's really important. Until 1986 the automatic processes were subtractive. You take a block and you chuck it in and the object is carved out of the block. Now you're building in a topological manner, layer on top of layer. So the Z Corporation 3-D printer is cool because it's so much like a printer. It's relatively small and inexpensive, about \$60,000 for the machine, but it also lacks the precision of the \$500,000 machines. It's basically an ink jet printer that prints with glue into a powder bed. Once the piece is formed it still needs to be post-processed by coating it in wax or epoxy. I've used five of the major additive processes along with some experimental ones. For different ends, you choose different tools.

BJ Can you speak a little about the imagery, if you can call it imagery?

MR I think you can, but that's a large issue. I'll have to think about that.

BJ It starts as an image but it changes into an object.

MR In these sculptures there are two levels of imagery. One would be imaginary or abstract and the other more literal or representational. These levels fit within each other so that there is a progressive serial quality. The literal images are the cow's head, the skull, and the uterus. The more abstract images are the blobs that emerge above the uterus (which I like to think of as thought bubbles), and a series of support structures, which contribute to the presence of the uterus. In the latter the supports evolve and push the form up—they present it.

These pieces rest against the backdrop of the print,

Visual Taxonomy in which each of the images has a certain contextuality about it. For example, Gerome's painting of Pygmalion offers an example of a critical set of thoughts which represent the sculptor who wishes to make models of the world, and who confuses the representation with reality and the generative aspect of these kinds of endeavors. This painting, and Gerome's work in general, is particularly problematic in terms of transgressive masculine sexuality. My earlier work, exhibitions at 303 Gallery and at Basillico Fine Arts, dealt with these issues, but the Kemper exhibition goes further. *Visual Taxonomy* tries to locate this and other issues in the sculptures.

BJ Can you tell me about specific work?

MR *DOBeDoBeDo*, which is a bunch of wires with a clay penis on one end and a clay finger on the other is based on a joke. Sartre says "To do is to be." Camus says "To be is to do." And Sinatra says "DoBeDoBeDo" So the work was based on a split, a confusion between doing and being. The work has evolved from that. So we have an imaginary or metaphysical anatomy placed against the backdrop of a medical anatomy. The skull in my most recent work is scanned from a human head. I purchased it as a 3-D model. It's based on CAT scans.

BJ How does this go beyond the earlier works?

MR First of all, the order of complexity is much greater. And that's due to my use of the technology. When I saw the 3-D program and how accessible it was, because all the metaphors are building metaphors, I realized immediately that I was in a brave new world. In the earlier works I had conceptualized structures within structures and frankly was sitting around scratching my head, trying to figure out how to do it. If I had done it by hand, so to speak, molding each part, it would have taken years. So I had conceptualized all these works, had drawings for them, and then came this process on the computer.

BJ One form inside another as a metaphor for both physiology and thought was facilitated by the CAD programs?

MR I'd say so. This mode has been around for a long time, but it's literal—you can see it and feel it. At the same time, the CAD program gave me a lot of freedom. I could have forms that collide with each other, and I still see them. If I'm spending a little time making something with my hands, and I've got two forms, I can't put one inside the other. I can't shrink one down to 1/10th size and drop in into the other. Now, these things may not yet-be realized as objects, but I'm able to visualize without having to be tied to any real world parameters. That's also part of the problem, because these designs can become awfully stilted.

In a way I didn't answer your question, but the point is that I'm able to build anything I can imagine. Realizing the potential of the computer was like falling into a pit that happened to have a bunch of gold in it. You've fallen, but in some sense you're richer for it.

BJ You were saying that you were involved in this work in a more physical, personal way.

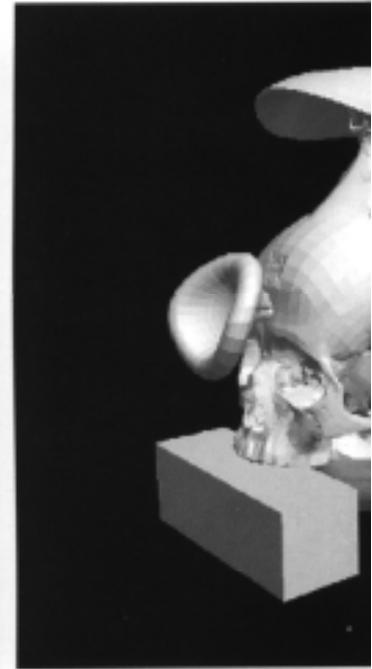
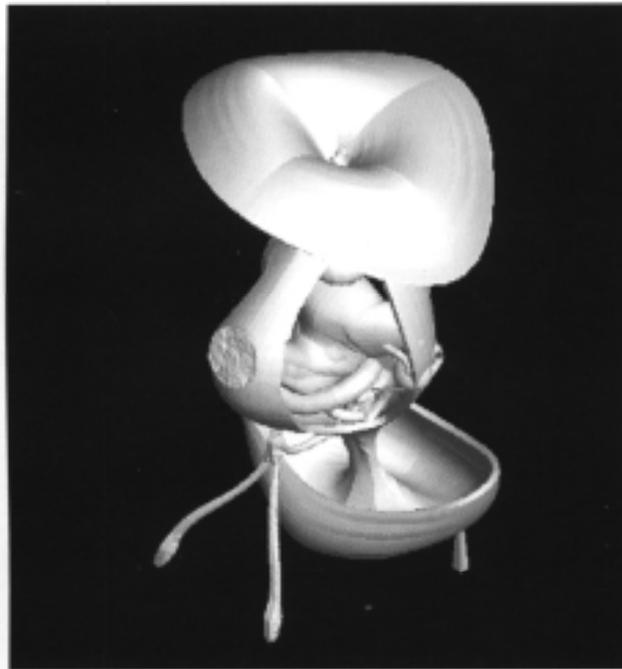
MR In one sense I'm more removed, but in another sense I'm closer to my thoughts and to the images they produce. I can create libraries of forms that work together and use them in syntactical ways. In another way, it still takes me quite some time to design these pieces. Every millimeter is touched by my sight. I know them more intimately than anything I've ever made.

The presence of the hand is interesting, because there is still the hand in here in a literal way. First of all, I know how to build things, so these works are informed by the Knowl-

edge of hand construction. It's as immediate as plaster.

Somo Noeticus [shown in the 1995 Whitney Biennial] was the first computer image of any significance for me. Set against the backdrop of the palm of my hand was one of my creatures, and he taken the skin of my hand and wrapped it around the object. At that point I thought, "Oh my God, I can skin these things with my own skin!" Having made this assumption I found that it wasn't technically possible. The technical community had not thought it important to have a textural aspect, and this inspired my own research. Eventually I tracked it all down and got technicians to implement this technology. So now you can scan any texture and apply it. But, of course, my interest was the hand. In all these pieces there is some presence of my hand, and the scan is a palm print. Then I bring it into the CAD program, and whatever is white in the image becomes high and whatever is black becomes low, with all the greys in between. For example, where the skull touches the uterus there is my

I have had a continuing interest in Hindu sculpture. For example, each finger is associated with a value, with a metaphor, etc. So if the sculptures rested upon two of four fingers, it rested on those values. The length of the sculptures also pointed to their location in the body, and so on. But what really interested me was a system of multiple relational values. This becomes more piqued in the Vedic body structure. There are many levels in this structure and they are observed with great rigor. The rigor defines the anatomy, the chakra, the word within the chakra, the sound within the chakra, and on. All these things fit within the lotus which has a certain number of petals, a color, and a deity who also has many qualities. Each of the qualities of the deity within this chakra is associated with myths that in turn inform the abilities or operations of that chakra. And, of course, each chakra rules over various physical parts of the body, as well as intellectual, emotional, and psychological aspects. All these wonderful things are woven together. But,



Left to right: ANA1 Ajiia 2 Ajiia 3, Perfect1 Perfect 3, working CAD drawings, 1997

palm print. This is particularly clear in ANA5.

BJ Your hand literally is on the surface of these works.

What does that mean?

MR It's important for a number of reasons. I'm not trying to be coy or opaque, but each of the aspects of the work is here for a reason. I'm using the fingerprint for various reasons. If this were a seal and you put your thumbprint into it, that would authenticate it. There's a set of authorship issues that, as a person coming out of the 80's I'm aware of. The fingerprint blossoms into these issues. I don't necessarily solve them, just bring them in. One is the problem of copyright. My fingerprint is stored in the file, so anytime the piece is made it will have the fingerprint in it. But curiously, that doesn't protect the work at all because it's in the file and if the file were stolen and made again, the print would come out in the model. We've got a lot to sort out that way. There's also the issue of the hand of the artist being removed by digital media and reinvigorated by applying the texture.

the weave is slippery: at one point it is anatomical, at another it's energetic, and at another it's linguistic. Within the palm is another minor chakra. As a sculptor, naturally I'm interested, because the scales are always shifting. BJ You mentioned the issue of male sexuality and obviously that runs through your work. Could you be more explicit? MR Ok, well, the Pygmalion thing. Let me briefly retell the story. There's a sculptor who begins to create a woman he finds more beautiful than any living woman, so he prays to the gods and they grant him his wish and bring her to life. First of all, the fact that he's a sculptor is significant, because he finds the world wanting. There's this lack of faith that points to his feeling that the world's just not enough. Then there's his construction of erotic desire. He must have the Other to project upon from his own psyche. This model-making thing, this step backward away from reality into a mythology, is part of the problematic aspect of this, the masculine construction. I think that it gets more complicated, because the woman is an object to begin with.

Then she's imbued with these qualities and is in some sense invented by him.

Other manifestations of that mythology are Frankenstein which has a nice gender reversal about it, and cybernetic creatures, as in *Blade Runner*, where you have the replicant Harrison Ford's character falls in love with. To take the uterus and put it inside a skull might be perceived as a slight to feminist thinking. I do not mean it that way. This is why I felt compelled to develop the territory further. One would hope that *Visual Taxonomy* goes a long way in locating the polemic. Each of those subjects I've just mentioned can be reconfigured and analyzed in great depth. I want to offer the territory, and I want that territory to be experienced as problematic.

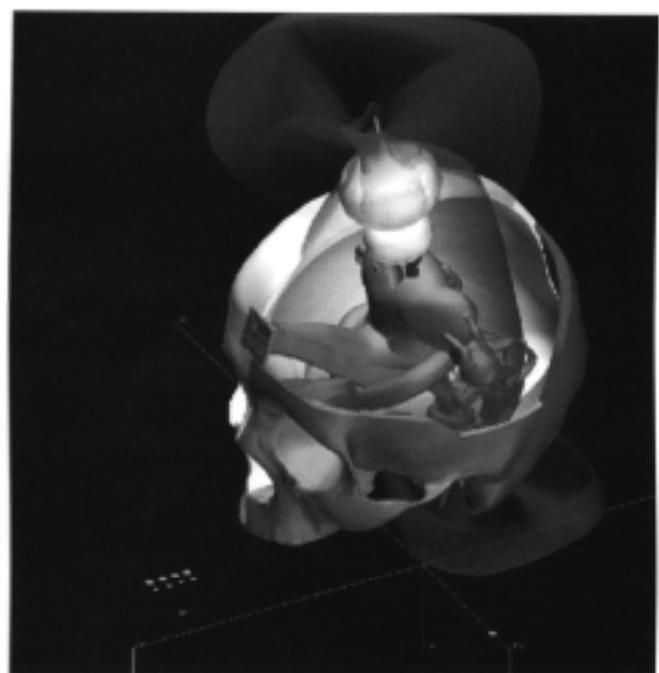
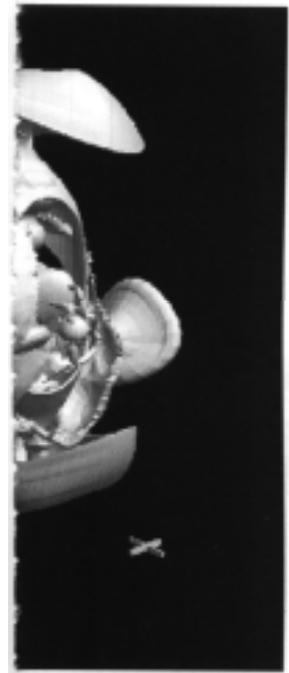
BJ Can you describe how this relates to your current work?

MR Considering the works in the Kemper show, the skull is neither masculine nor feminine, but there is something Pygmalion-like about what I'm doing. On one level there is

photographs. I brought photographs into the background of the CAD space and then traced the outlines and did different things to produce a three-dimensional uterus.

BJ In colliding these objects, putting one inside the other, do you consider the meaning of the skull enclosing the uterus?

MR Yes, very much. The exact placement of the uterus inside the skull is in direct relationship to aspects of the subtle body. Thus the series is called *AJNA* which is a reference to the sixth chakra which is between the eyes. This has a lot to do with what I call the body of sex, sleep, and death. I'm attempting to make a window for the many associations these two images bring up. The uterus has symbolic, literal, and aesthetic qualities which the work engages. Also the skull brings up associations of death and science. It's an image that occurs in the iconography of St. Jerome, where there is always a skull, and two animals—one wild, the lion, and one domestic, the dog. A Durer woodcut of St.



a dark quality. On another level it begins to shift toward my interest in the baroque relationships in Hinduism and the subtle body. So that the function is not just of the polemic of male desire, but ventures into areas which are indescribable. I have said that these sculptures come from places I can't fully rationalize.

BJ Does the development of this problematic justify your use of these evocative images?

MR That depends on how much you believe my intent. If you look at my earlier work such as *Stud Study* I was wrestling with the same issues. I did it very consciously. I purposely stayed away from any female physiognomy. I felt that all I could speak about was myself—my own masculinity. I don't believe that there is an apologetic aspect to the signaling of these issues. Representing the uterus seems to be the logical next step in dealing with the problem of male sexuality as I've described it.

BJ You purchased the digital files that created the skull. Where did the uterus come from?

MR I actually built it in the CAD program from anatomical

Jerome is included in the *Visual Taxonomy*. Those images continue to be the map for the various meanings of the work.

BJ Could you comment on the idea of imagery as it is complicated by the fluid movement from two to three dimensions availed by digital technology?

MR One reason I'm so fascinated with this technology is its fluid rendering of the text/image/object discourse. It is correct to say that from a drawing you make an object. The drawing is in the computer. It is essentially perspectival. In other words it's a three-dimensional drawing, and you can rotate around it etc. Mathematically it's considered so. But of course we don't have the benefit of the tactile. In this sense image and object or image and form in my mind are completely fluid. But the physical realization of the object does something mysterious. I think all of us, as makers, are interested in this. Even when you go from a sketch to a painting, or from your head to the world, it's a tremendously interesting movement. You have expectations of what the thing will be, and of course the expectations are disappoint-

ed but some qualities emerge which are unexpected and wonderful things take place.

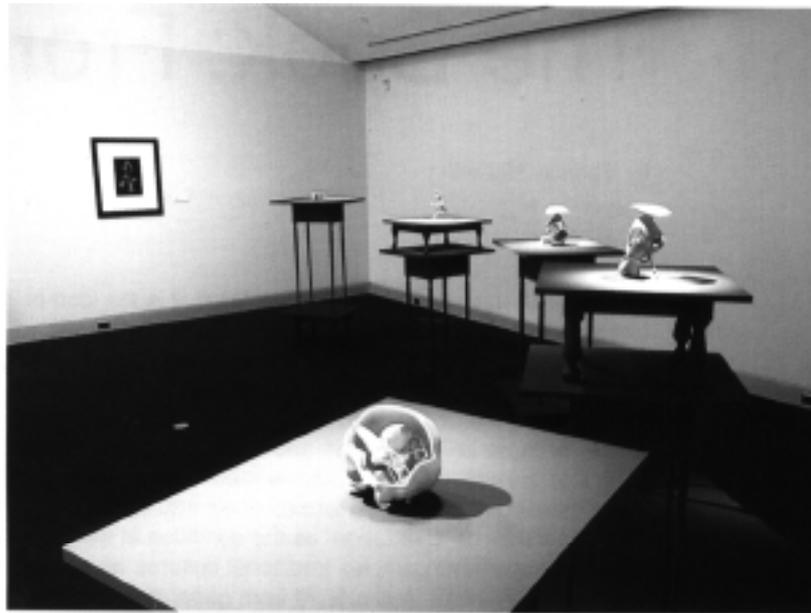
There are whole bodies of thought which speak about the primacy of language over image, that everything is known through language. The CAD and the computer are quite interesting in this respect, because there are places where object, image, and the text converge. What you see in a CAD program is a code, and of course a code is a language. It's back there and you can go and look at it. On one level this would support the theory that language is primary over image. Though I cannot rationalize or justify it clearly, I experience image-thinking or object-thinking as primary. I don't want to say pre-linguistic, but it is another kind of thought pattern. So in a certain sense we have this place where text and image and form are almost interchangeable. They're completely of the same quality. Not only can you go from language to image through the CAD to object, but also you can reverse this and go from object to image back to language. It's cyclical and fluid. It's both horizontal and vertical in its organization. So there are times when the image is preeminent, and times when the object is preeminent, and times when the text is preeminent. I'm trying to explore this literally in terms of this sculpture, CAD, rapid prototyping area. "What you see is what you get" is a formula developed for type fonts. But it comes back to the possibility that reality is what you speak it to be. Seeing itself becomes a primary creative activity.

BJ You've now crossed over into territory where the logic we operate under no longer holds true. There is little functional language to bridge the worlds of mathematical logic and mystical thought. Is that why you reference the subtle body and other mystical terms in your work?

MR For sure. Some important parts are being left out of the conversation. If you look at the *Rig Veda* which is the Hindu text that lays out the subtle body, it is certainly not scientific by current standards. In other words, it's not testable, verifiable, or empirical. But as a body of thought it has been developed rigorously, and logically as well. It's not a mathematical logic, it's not equational, but the real issue is that it's not verifiable. In science things are provable so that they are repeatable either in experiment or discourse. But what interested me about Hinduism was that it was developed in a similarly rigorous manner, similar to science's discourse, but about experience that is difficult to rationalize.

Despite the rigor of the logic, it's still ambiguous. It isn't the same for me as for you. Nor could I convince you that chakras are there when you are sure they are not. I want to make it clear that the work doesn't hinge on belief or non-belief. If we go back the other way and we see science as a belief system, it starts to evolve its own ambiguities. That is one of the values of bringing metaphysics into the conversation. In one of the taxonomy images, there's a computer image of the visible man (from the criminal who was sliced up and recreated digitally) against images from Leonardo's *Codex Madrid*. It's a beautiful image with rich historical associations. But what's more interesting is that in the *Codex* notebooks, Leonardo drew all the reproductive organs incorrectly. He drew them according to the beliefs of the day, not against what he saw.

The title of my next show at Central Fine Arts, in New York, is *The Ecstatic Body*. In medicine there are many things that are unknown about the body, but there is the expectation that things will be understood. If we look at the ecstatic body in terms of our common experience, say in



Above *Digital Psyche*, installation view at Kemper Museum of Contemporary Art and Design, Kansas City, Missouri.

Opposite page: Michael Rees Visual Taxonomy, ink jet print (47x36 in.), 1997

dreams. We find no agreement on what dreams mean, even though a great deal of serious intellectual energy is spent trying to determine what they are, not to mention why they exist. Anything in a dream can be more than itself. An object in a dream has the potential to be a symbol which contains within it the code that will allow it to assume other meanings for the viewer.

When I think of the ecstatic body-and I include any dream state in the definition of the ecstatic body-I'm grateful for the fact that it is ambiguous. That there isn't an objective relationship between what you see in a dream and its meaning. That's what interests me most about this ecstatic experience. At best efforts there's no testable relationship between what is in the dream and its meaning, but there is a rigor to the language of dreams that's beautiful.

BJ By bringing in mysticism are you attempting to contextualize or find a way to describe these strange illogical spaces that digital technology conjures up, such as "what you see is what you get?"

MR If you're asking if I'm using these symbols in place of another experience or my own experience, I'm not. The relationships I'm creating are quite different. There's no uterus in the AJNA chakra in classical Hinduism. Hinduism isn't standing in for my inability to speak about these things. Rather it is a reference for the construction of multiple relational values.

Bill Jones is editor of ArtByte