

THE CONCEPT

- From the relationship between hunter and prey explored in the cave paintings of Lascaux, to the shock of the first urban air raid depicted in Picasso's *Guernica*, the role of art has been to bring clarity and understanding to those feelings, issues and desires that mankind has found the most difficult and challenging to grapple with.

- For millennia, art and religion on the one hand and science and technology on the other have been the two key means by which we humans attempted to understand life. Often they've been wholly oppositional forces; occasionally they've melded indistinguishably.

ART AND SCIENCE IN THE NUCLEAR AGE

- Nowhere is this divide more glaring than in the nuclear arena; nowhere are the scientific issues more often misconstrued and misperceived; nowhere is the data harder to clarify and analyse; nowhere is the social and political impact more contradictory and confused.

Presented by James L. Acord

18th July 2001

- What art understands – which often science doesn't – is that where the human heart is concerned perception is more important than fact. For me, as an artist, public perceptions of nuclear technology will never be clarified until that same technology is put into the service of art, where its various capabilities and parameters might be humanised and reconciled.

- Clearly, there are obvious reasons why this has not yet been done. But the fact remains that since the Stone Age the best technology has *always* been used in the creation of art. It might indeed be argued that technology, true technology, is just the art of the machine.

NATIONAL MUSEUM OF SCIENCE AND INDUSTRY

- Ancient civilisations are remembered and understood through the art and technology they leave behind; the clearest expression of any culture past has always been the point at which these two pursuits meet and combine. And the art-form which we most often find at this meeting point is that of sculpture.

- At this point in time, the only artefact of contemporary culture guaranteed to survive for long into the future – for hundreds of thousands of years into the future – is its "nuclear waste". And yet this most incredible, fundamentally *sculptural* technology – having to do with the rearrangement of solids at the atomic level – is the one area of our culture that remains untouched by art.

James L. Acord

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- It is this situation which I have spent my life as an artist trying to change. At the best, art and science both foresee and predict a reality that is yet to come, and at their highest level, both use the same methodology for approaching truth. I believe that we can only hope to survive as a culture, and can only hope to understand the nature of our nuclear legacy to the generations to come, by closing the gap between art and science.

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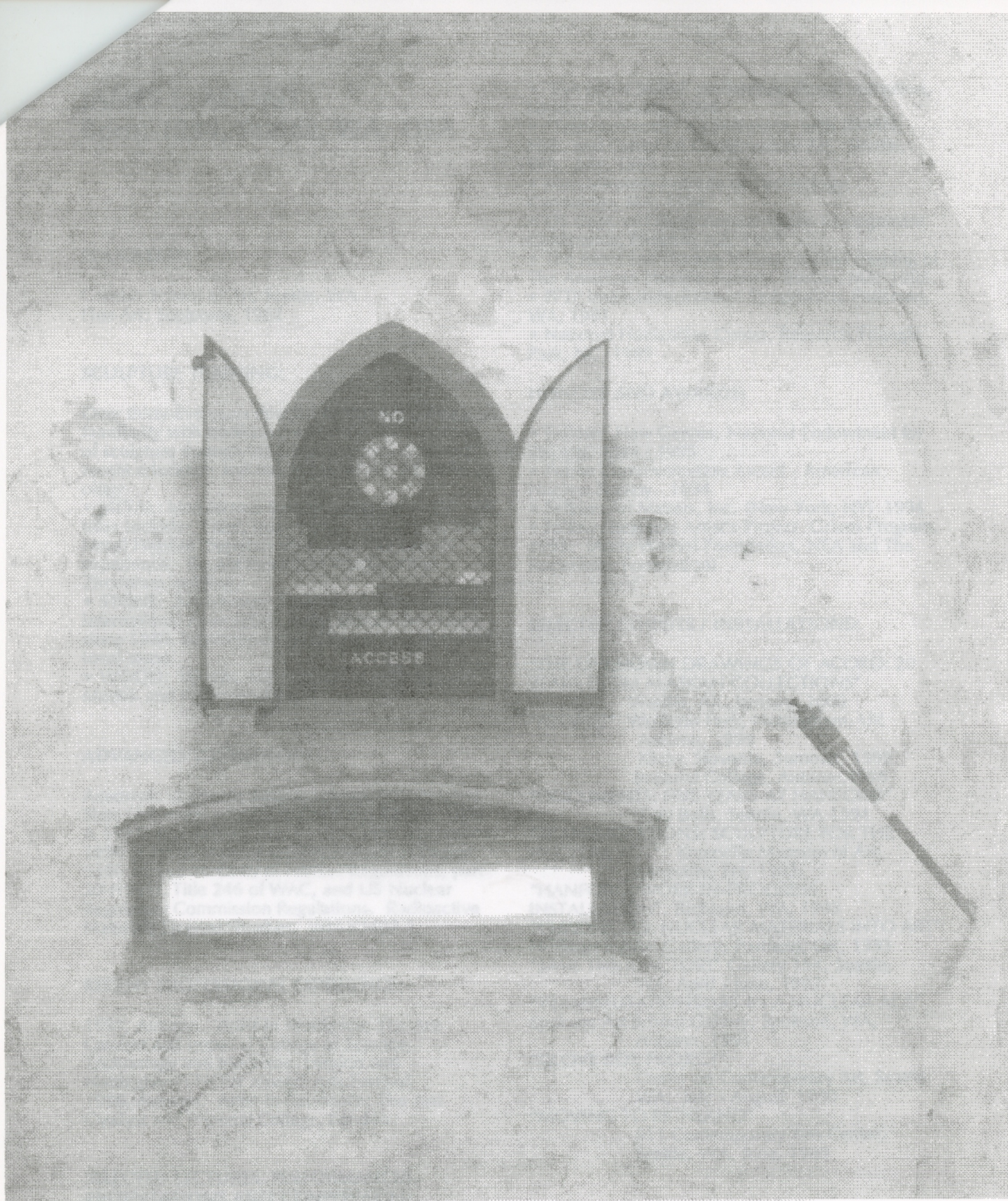
Temp. in London until 24th July:
020 7837 7479

THE CONCEPT

- From the relationship between hunter and prey explored in the cave paintings of Lascaux, to the shock of the first urban air raid depicted in Picasso's *Guernica*, the role of art has been to bring clarity and understanding to those feelings, issues and desires that mankind has found the most difficult and challenging to grapple with.
- For millennia, art and religion on the one hand and science and technology on the other have been the two key means by which we humans attempted to understand life. Often they've been wholly oppositional forces; occasionally they've melded indistinguishably together. Today, it seems, they are warring factions once again.
- Nowhere is this divide more glaring than in the nuclear arena; nowhere are the scientific issues more often misconstrued and misperceived; nowhere is the data harder to clarify and analyse; nowhere is the social and political impact more contradictory and confused.
- What art understands – which often science doesn't – is that where the human heart is concerned perception is more important than fact. For me, as an artist, public perceptions of nuclear technology will never be clarified until that same technology is put into the service of art, where its various capabilities and parameters might be humanised and reconceived.
- Clearly, there are obvious reasons why this has not yet been done. But the fact remains that since the Stone Age the best technology has *always* been used in the creation of art. It might indeed be argued that technology, true technology, is just the application of *both* art *and* science for the enrichment of the human state.
- Ancient civilisations are remembered and understood through the art and technology they leave behind; the clearest expression of any culture past has always been the point at which these two pursuits meet and combine. And the art-form which we most often find at this meeting point is that of sculpture.
- At this point in time, the only artefact of contemporary culture guaranteed to survive for long into the future – for hundreds of thousands of years into the future – is its “nuclear waste”. And yet this most incredible, fundamentally sculptural technology – having to do with the rearrangement of solids at the atomic level – is the one area of our culture that remains untouched by art.
- It is this situation which I have spent my life as an artist trying to redress. At their best, art and science both foresee and predicts a reality that is yet to come, and at their highest level, both use the same methodology for approaching truth. I believe that we can only hope to survive as a culture, and can only hope to communicate the nature of our nuclear legacy to the generations to come, by closing this gap.

THE WORK

- Technetium, element 43, was the missing puzzle-piece in the Periodic Table until Glenn Seaborg created it from Molybdenum using a linear accelerator. It does not exist in nature because, being naturally radioactive, it had all decayed away since the creation of the universe. It thus became the first man-made element.
- Technetium would have remained forever a rare laboratory curiosity but for humanity entering the nuclear age.
- The fissioning of an atom of uranium produces two fragments that fall near the middle of the Periodic Table. Technetium is a characteristic one of these fragments.
- Technetium, isotope 99, has a half-life of 213,000 years (2.13×10^5 a). It is a beta emitter and is emblematic of "nuclear waste", by dint of being one of its most pernicious components.
- Through neutron capture Technetium 99 can be transmuted to Ruthenium, element 44, a noble, precious and – crucially – a *non-radioactive* metal in the Platinum family. Through neutron capture, in other words, Technetium 99 can be rendered harmless.
- By incorporating a token example of this transmutation in a work of art – by turning harmful "waste" into precious metal – I hope to symbolise through actual demonstration mankind's ability to take control of nuclear waste issues.
- This, of course, is not supposed to be a mere laboratory demonstration. The work of art itself is as crucial as the application of the technology; it is and through the work that the issues of temporality, of transmutation, of power and its channelling and containment will be addressed.
- The containment, distribution, preservation and application of nuclear waste is as important as the containment and distribution of holy relics was to the medieval Catholic Church; as the preservation of the body after death was to the ancient Egyptians; as the application of the laws of perspective was to the artists of the Italian renaissance.
- It is a problem which *cannot* be simply buried and forgotten, if only for the reason that the technology to achieve that still remains beyond our means. At a time when the debate is frozen and coagulated both in the public mind and within the scientific community, I would submit that it is time to turn to art as a means of representing the issue to all concerned, in order to reinvigorate it and – perhaps – to encourage innovation and movement on all sides. This has long been my aim as an artist. The utilisation of micro-grams of transmuted Ruthenium in a sculpture is my logical next step.



• In the course of residences in UK (1998 - 1999)
presentations at some dozens of colleges, univer-
sities, schools and arts organizations were given, in
London and the Mid-lands

"NO ACCESS" - 1998 - James Acord

• Ljubljana, Slovenia, August, 1999

Installation View

• "Art and the Atomic State" Imperial College
London, UK

ATOMIC Exhibit - trdnjavi Artilerija, Bovic, Slovenia - 1999

• British Association for the Advancement
of Science, Cardiff, Wales, August, 1999

Photo by Carey Young

JAMES L. ACORD

Born: 1944, Seattle, WA USA

EDUCATION

Cornish School of Art, Seattle, WA
Fine Art: Sculpture, 1962

SCULPTURE TRAINING:

Over thirty-five years devoted to acquiring thorough familiarity with traditional materials and processes of sculpture through industrial employments and recent education and training in advanced technology.

- **METAL:** Non-ferrous through specialty steels. Job titles include: Fitter, Iron-worker, Shipwright, and Metal Finisher. Supervisory and quality control experience. Recent training in Titanium and Zirconium welding.
- **STONE:** Journeyman Sculptor; Granite Cutters International Association, Barre Branch (Vermont), since 1980. Extensive experience carving all traditional stone.
- **WOOD:** Woods, Mill, Re-saw, Cabinetry, Model- and Pattern-making.

ADVANCED TECHNOLOGY:

Academic studies in nuclear science (Washington State University - Tri-Cities Graduate Center, 1989 & 1991) and training (Hanford Nuclear Reservation, 1990 & 1992) Meeting US Department of Energy 5480.11 and 10 Code of Federal Regulations, part 20 (1991), Title 246 of WAC, and US Nuclear Regulatory Commission Regulations. Radioactive Materials License Number: WN-IO407-1.

RECENT PROFESSIONAL EXPERIENCE:

1999, Autumn. Artist-in Residence; The Arts Catalyst and Imperial College of Science, Technology and Medicine, London and Nottingham's NOW ninety9 Arts Festival.
1998, Autumn. Artist-in-Residence; The Arts Catalyst and Imperial College, London.

SELECTED LECTURES, PERFORMANCES, PRESENTATIONS AND CONFERENCES:

- In the course of residencies in UK (1998 - 1999) presentations at some dozens of colleges, universities, schools and arts organizations were given, in London and the Mid-lands.
- Ljubljana, Slovenia, August, 1999
- "Art and the Atomic State" Imperial College, London. November, 1998
- British Association for the Advancement of Science, Cardiff, Wales, August, 1998

- "Eye of the Storm" conference. Royal Institution, London, February, 1998
- "Transnacionala" a conference with IRWIN, NSK, and Center on Contemporary Art. Seattle, WA. July, 1996
- Massachusetts Institute of Technology, Cambridge, MA, 1994
- US Dept. of Energy Annual Waste Management Conference, Phoenix, AZ, 1993
- The Atom and Human Values; annual meeting of The American Nuclear Society, Boston, MA, 1992.
- FFTF Internationalization Symposium, Patterson, WA, 1991
- National Humanities Center, Research Triangle Park, NC, 1989

HONORS AND AWARDS:

- Fellow: New Genres; National Endowment for the Arts, 1994 - 1995
- Public Communication Award - American Nuclear Society. 1994
- Fellow: Art Matters, Inc. (New York, NY) 1994
- Fellow: Regional Artist's Project Grants Program. 1993. (Andy Warhol Foundation, NEA and The Rockefeller Foundation)

SELECTED EXHIBITS / INSTALLATIONS:

- "THE UNKNOWN DRAWINGS OF ACORD: 20 YEARS FROM ALASKAN COLLECTIONS"
Wasilla, AK. January, 2000
- "ATOMIC" Wollaton Park, Nottingham, UK
Autumn, 1999
Kluze, Slovenia, Summer, 1999
Imperial College, Autumn, 1998
- "DOCUMENTS: FIVE YEARS AT HANFORD"
Two Bells, Seattle, WA 1994
- "TRANSMUTATIONS: SCULPTURE FOR THE NUCLEAR AGE" Knoxville Museum of Art, Knoxville, TN, 1993.
- "HANFORD: WORK-IN-PROGRESS INSTALLATION". Richland, WA, 1993
- "CHRONICLES: NUCLEAR MATERIALS INTO ART" Hoffman Exhibit Gallery, Portland, OR, 1993
- "SAVE THE REACTOR!" Gallery 154, Seattle, WA. April - June, 1992
- "TRANSMUTATIONS/ART IN A NUCLEAR AGE" Spokane Art School Gallery, Spokane, WA, Autumn, 1991
- "GLOVE BOX PROJECT"
Center on Contemporary Art, Seattle, WA, July - August 1990
- "MOVING TO RICHLAND"
911 Contemporary Arts Center, Seattle, WA, June, 1989