



Body Worlds: An Anatomical Exhibition of Real Human Bodies

Summary of Ethical Review

Preface

The attached Ethical Review reflects the rigorous study conducted in 2004/2005 by the California Science Center concerning the exhibit *Body Worlds: An Anatomical Exhibition of Real Human Bodies* with the aim of assessing it for display at the Science Center. As discussed in the attached report, central to the review process was a first-hand review of relevant consent documents and practices by an expert bioethicist and extensive analysis by the Science Center's Ethics Advisory Committee.

The scope of our work was to review relevant information pertaining to the *Body Worlds* exhibit as of 2004. Our goal was to evaluate the ethical issues related to hosting *Body Worlds*, principally to ascertain sufficient body donor informed consent, educational value of the exhibit, and the respectful treatment for human remains. Based on this review we hosted *Body Worlds* with the conditions described in this report, and with the exception of the non-viable fetuses that we chose not to display. The decision to exclude these pieces from the Science Center exhibition was based on our sole judgment that they did not meet the standards outlined in the Ethical Review – specifically that their science educational value did not outweigh community and cultural sensitivities.

While we are pleased that the study conducted by the Science Center has been useful for other museums, we do not presume to speak for others. Based on our experience and research, we emphasize the following recommendations for other venues:

1. The active involvement and advice of a local Ethics Committee is indispensable. Engage the Ethics Committee to evaluate ethical and cultural concerns prior to booking an exhibition.
2. To exhibit human bodies or organs without full, free and informed consent from the living donor is not acceptable. Verify that bodies and organs have been donated with specific, full and informed consent.
3. Ensure that the exhibition is in compliance with laws and regulations, in particular when cultural, ethical, or religious controversies can be expected.

We make these recommendations with the utmost appreciation for Dr. Gunther von Hagens and his goal of advancing “the medical enlightenment and appreciation of lay people”. His groundbreaking educational exhibition which debuted at the Science Center in 2004 is highly valued and remains a gold standard for the field. In considering this and any exhibit involving human remains we recognize the decisions faced by today’s museums are complex and at times controversial. We have prepared this report describing our review process in the hope that it will be helpful for other museums in their deliberations.

November 30, 2009

Jeffrey N. Rudolph, President and CEO, California Science Center
Diane Perlov, Ph.D., Senior Vice President, Exhibits, California Science Center

Ethics Advisory Committee Members:

Father Richard Benson, C.M. Vincentian Fathers at St. John’s Seminary
David C. Blake, PhD, JD, Cedars-Sinai Health System
Rabbi Morley Feinstein, University Synagogue
Dr. Stanley Korenman, MD, UCLA Medical Center
Dr. Neil Wenger, MD, UCLA Department of Medicine

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Summary of Ethical Review **2004/2005**

Background

In December 2004, the California Science Center was interested in launching the debut in America of the European exhibit *Body Worlds: An Anatomical Exhibition of Real Human Bodies*. The anatomy and physiology exhibit developed by Dr. Gunther von Hagens features more than 200 real, preserved human specimens, including entire bodies as well as individual organs, body parts, and transparent body slices. The exhibit had toured throughout Europe and Asia from 1995-2004, and had been viewed by over 15 million people. While *Body Worlds* was extremely successful with the viewing public, it was not without media controversy in some European countries. After seeing *Body Worlds* in Germany, Science Center senior staff felt the exhibit had tremendous educational value. Due to the nature of the exhibit and to its previous media controversy, the Science Center instituted a rigorous review process to assess *Body Worlds* as a potential special exhibit. Central to this review process was a local Ethics Advisory Committee that was established to advise the Science Center on the ethical issues related to hosting *Body Worlds* and the cooperation with an internationally recognized bioethicists.

Local Ethics Advisory Committee

The Science Center Ethics Advisory Committee for the *Body Worlds* exhibit was composed of the following religious, medical and bioethics leaders in the greater Los Angeles community:

Reverend Richard Benson, C.M., Ph.D.
Assistant Professor of Moral Theology and Academic Dean
St. John's Seminar, Roman Catholic Archdiocese of Los Angeles

David C. Blake, Ph.D., JD
Vice President, Mission & Ethics/HR and Organizational Responsibility Officer
Saint John's Health Center

Rabbi Morley Feinstein
Senior Rabbi, University Synagogue

Reverend Leonard Jackson
Associate Minister
First African Methodist Episcopal Church (First AME)

Stanley G. Korenman, MD
Associate Dean for Ethics and M.S.T.P., and Professor of Medicine,
UCLA Medical Center

Aurora Mordey, Ph.D.
Associate Professor of Spanish and Director of Language and Cultural Studies
St. John's Seminary of the Roman Catholic Archdiocese of Los Angeles

Reverend Cecil L. "Chip" Murray, REL. D.
Senior Minister
First African Methodist Episcopal Church (First AME)

Thomas Weinberger
CIO, Weinberger Asset Management, Inc.
Bioethics Committee and Executive Committee, Bioethics Center
Cedars-Sinai Hospital

Neil S. Wenger, MD
Professor, General Internal Medicine, and
Chairman, UCLA Medical Center Ethics Committee
UCLA Medical Center

Fran Wiley
Retired nurse
UCLA Medical Center

Overall Opinion and Specific Recommendations of the Ethics Committee

- The consensus of the Ethics Advisory Committee was that the exhibit has considerable educational value and is appropriate for the Science Center.
- What makes the exhibit so compelling (real bodies in everyday poses) is also what makes it most controversial. Without those very features, the exhibit would not be such a powerful educational experience.
- The religious advisors felt that the exhibit was not a breach of ethical and moral Judeo-Christian tenants. However, there may well be opposition to the exhibit based on individual values and sensitivities, and these need to be carefully considered. The two most sensitive areas are likely to be the source of the bodies and the display of the bodies in everyday poses. The Science Center needs to properly address both these issues and effectively communicate this to the public.
- The plastinates are displayed in the context of science, health and medical education, and create an atmosphere of respect.
- The key goal of the exhibit is nicely worded in the Body World's catalog: "For the medical enlightenment and appreciation of lay people".

All the bodies need to be properly donated. Advisors felt that this is the most controversial aspect of the project. Proper body donation should be verified to the Science Center's satisfaction, and involves several components:

The Body Donor Form needs to provide adequate informed consent

- Several advisors reviewed the Body Donor Form and felt it was quite good – quite thorough. But, it should be reviewed to ensure that it meets an adequate standard of disclosure and informed consent.
- Also, the form provides several use options open to the body donors. Review the Donor Forms to make sure the bodies in the exhibit consented to public display.

The source of donated bodies should be verifiable

- Ask an independent party to review donor forms, verifying that all bodies are donated properly.
- Communicate to guests, near the entrance of the exhibit, that the bodies are donated.

Special Bioethics Review by Professor Dr. Hans-Martin Sass

Following their recommendation, the Science Center contracted with an internationally recognized bioethicist – Dr. Hans-Martin Sass - for an independent review of the exhibit's body donor documentation. Hans-Martin Sass, Ph.D. is Director of the European Program in Professional Ethics, and Senior Research Scholar, Kennedy Institute of Ethics, Georgetown University, Washington D.C. and Professor of Philosophy, and Director of the Center for Medical Ethics, Ruhr University, Bochum, Germany. Guest Professor, Peking Union Medical College, Chinese Academy of Medical Sciences, Beijing, and other universities. Prior to being contacted by the Science Center, Dr. Sass stated in writing that he had no contacts with IfP, nor had seen any of their exhibitions. He was aware of the works of Gunther von Hagens, however, and had followed controversial debates in the press and seen television clips.

Body Donor Consent – Review and Findings

In March – April 2004, Dr. Sass traveled to the Body Worlds' offices in Germany (Institut fuer Plastination [IfP] in Heidelberg) where he had extensive conferences with principal IfP staff, and reviewed body donor consent documentation. In addition he visited the Body Worlds exhibition in Frankfurt, Germany. On behalf of the Science Center, Dr. Sass reviewed all deceased body donor consent forms (206), matched the donor forms with death certificates, verified that the body specimens were properly donated for the purpose of public exhibition, and verified that the donor forms met established informed consent standards. Below is a summary of his findings.

The Institute for Plastination Body Donation Forms meet the standards for Informed Consent in Germany; they actually exceed the legal requirements for informed consent in clinical research and the customary forms for body donation for education to university based Departments of Anatomy.

While 'informed consent' of patients and probands in therapeutic and non-therapeutic clinical research is legally required in Germany since 1900, there is no definite form used for obtaining such informed consent. As all clinical protocols are different, Institutional Review Boards or Ethics Committees review each and every informed consent form as far as information on risk and potential benefit, withdrawal, and easy-to-understand language is concerned. The IfP donation form is more detailed than most forms for body donation, in as far as it allows the donor to express her/his reasons for donating and for making decisions to include or exclude consent for public exhibition, i.e. educating lay people and not just medical students. The IfP Declaration of Intent to Donate is easy to understand and expressively informs potential donors that at any time they may withdraw their declaration to donate.

The donors in this pool have agreed to public display for educational purposes. This agreement is detailed and allows individuals to select from a variety of options such as: anonymity, understanding the plastinated body or organ as an 'anatomical work of art' or not and allowing it to be understood one way or the other and to be exhibited either or not as a work of art, agreeing to

allow 'to touch my plastinated body'. Dr. Sass verified Death Certificates and related Body Donation Forms of 206 persons by matching the original Donor Forms with each individual's Death Certificates. Dr. Angelina Whalley has confirmed that whole-body plastinates as well as organ plastinates in the Frankfurt exhibition are from this pool of 206 donors. The Science Center followed up by reviewing each of the 206 donor forms to verify that approximately 180 donors had agreed to public display for educational purposes.

There is a 'fire-wall' between the donor forms and death certificates and the plastination laboratory. Therefore, privacy of donors and the detailed information on donor's worldview, philosophy, and reasoning favoring body donation over traditional burial is protected from staff members in the office and medical personnel and experts in the plastination laboratory. This protection of personal data is in accordance with German data protection law and privacy regulation in general. IfP follows those rules. Professor Gunther von Hagens, Dr. med. Angelina Whalley, and the IfP have exercised their moral right to make ethical decisions to protect privacy of donors by not publicizing name, age, place of birth or death, or health status of donors.

It is unlikely, that a scandal regarding the unethical and illegal sale of bodies or body parts from a willed donation program might have occurred related to the plastination program of the IfP. The transporting, burying and disposing of corpses is highly regulated in Germany, and there is no incentive for IfP to engage in illegal act such as smuggling corpses into and out of Germany. IfP, according to a press release of 02-29-04, possesses 5900 signed body donor declarations.

The Institute for Plastination and Gunther von Hagens understand that they break a taboo in using donated bodies and body parts for public education and exhibition. They had to fight in court since they had public exhibitions in 1997 in Cologne, Oberhausen, Duisburg, and Heidelberg. Under German law, disturbing the peace of the dead, degrading treatment of corpses violating burial laws is punishable. They never lost a case and in most cases the public prosecutor decided to not pursue an investigation at all.

Decisions made by the California Science Center, based on the Recommendations and Findings of the Local Ethics Committee and the Special Bioethics Advisor

- 1. The exhibit presentation needs to be respectful.** The Ethics Advisory Committee reviewed the exhibit design and presentation and made the following recommendations, which were followed by the Science Center:
 - Text panels should be by each body explain the educational reason why the body is posed the way it is – to illustrate a particular anatomical or physiological feature.
 - The reproductive section should be in a separate, clearly marked area.
 - Staff should know the circumstances of the most controversial pieces, such as how the pregnant woman died and why the fetus was not saved. Also, did she consent knowing she was pregnant or before she was pregnant? Science Center staff discussed this and other

potentially controversial plastinates with von Hagens. Staff received satisfactory explanations and available documents were reviewed.

2. Consideration should be made for parents with children.

- Some people may not think the exhibit is suitable for their children. Therefore, advisors suggested the Science Center make sure that guests know what the exhibit is about before they buy their ticket. This ensures that all guests (especially those bringing children) make an informed decision about attending or recommending the exhibit. Following this suggestion, the Science Center consulted with a UCLA child psychologist as well as with its own early childhood education staff to develop a Parent & Child Guide to assist parents in deciding whether or not to bring their child to the exhibit. For those bringing their child, the guide provided tips on discussing the exhibit with their children prior to the visit.
- Advisors felt that there should not be a minimum age limit for the exhibit. But, perhaps an age where younger children should be accompanied by an adult. The Science Center required that all children under 13 shall be accompanied by a responsible adult. Advisors cautioned the Science Center that in order to make the exhibit understandable for children, they would not like to see us eliminate the science content to do so.

3. The exhibit needs an Entrance, which prepares guests for the experience. The guests should regard the bodies with respect and appreciation. To foster such an attitude, the Science Center developed an entrance foyer that, among other things:

- Communicates how the exhibit is organized, and what people will see;
- Answers major questions the guests may have on the authenticity and source of the bodies, and the reasons for the everyday poses;
- Communicates the science, medical and health purposes of the exhibit;
- Conveys the thorough ethical review, by community and religious advisors, conducted by the Science Center in preparation for the exhibit.
- Slows people down; and fosters a reverential and respectful mood.
- Puts the exhibit in an historical context with historical anatomy drawings and quotes.
- Encourages respect and appreciation for the bodies and the insights they provide.

4. The exhibit is powerful, and guests need time to acclimate themselves.

The below recommendations were followed:

- Early spaces should not show full bodies. Perhaps the historical drawings could begin the exhibit, putting it in an historical context.
- Begin with skeletons, which people may be more accustomed to seeing.

These recommendations were followed and the Science Center hosted two Body Worlds exhibits back-to-back from July 2, 2004 through March 27, 2005.

Recommendations for Future Public Exhibitions of Plastinated Human Bodies and Organs

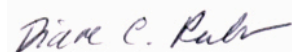
Based on the experiences with the first Plastination Exhibition in the United States by the California Science Center, the California Science Center and the Special Bioethics Advisor make the following recommendations for future exhibition.

- 1. A Local Ethics Committee needs to evaluate general and specific ethical or cultural concern of the planned exhibit. Such a review has to occur prior to contracting for the exhibition; the Local Ethics Committee should be available for consultation and advice during the run of the exhibition. Given different cultural and religious attitudes in different parts of the country, the advice of a Local Ethics Committee is indispensable.**
- 2. In the case of exhibits of plastinated human bodies or organs, a special review has to verify that bodies and organs have been donated with full and informed consent of the donors. To exhibit human bodies or organs without free and informed consent is not acceptable.**
- 3. It needs to be guaranteed that exhibitions are in compliance with laws and regulations, in particular when cultural, ethical, or religious controversies can be expected.**

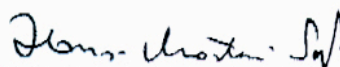
These recommendations are based on our concern for human and civil right, our high respect for personal choice, and our understanding that sensitive issues such as the public display of plastinated human bodies and organs will cause cultural and ethical debates. Such debates, however, are an essential part of science education and of evaluating the role of science and technology in society.



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Quotes from Ethics Advisors

"The glory of God is found in the human fully alive. The human body is essential to our humanity – to our personhood - and any growth in the understanding and knowledge of our human body leads to a greater appreciation of our dignity as human persons."

Father Richard Benson, C.M., Ph.D.
St. John's Seminary, Roman Catholic Archdiocese of Los Angeles

"What makes the exhibit so compelling – to have a meaningful and comprehensive view inside the real human body - is also what makes this exhibit most controversial. Without those very features, the exhibit would not be such a powerful educational experience."

David C. Blake, Ph.D., JD
Saint John's Health Center

"I was very proud that the Science Center board and the professionals involved were willing to take the risk of receiving some flak for the higher gain of educating the public about health and the human body. Moreover, when we see with our own eyes the unbelievable design of the human body in all its fine detail, it helps us understand better the Designer who created and shaped humanity."

Rabbi Morley Feinstein
University Synagogue

"People are preoccupied with their bodies but they don't know how they function. Body Worlds will give them access to the many miracles of the human body and help them understand their physical selves. As physicians we are delighted with the growing medical knowledge of our patients as we and they together try to optimize their health."

Dr. Stanley G. Korenman, MD.
UCLA Medical Center

"The plastinates teach unity of the body parts and the interdependence of each with the other. The lesson extends beyond biological unity to the sociological community."

Reverend Cecil "Chip" Murray
First African Methodist Episcopal Church

"This exhibit gives the public an opportunity usually reserved for medical professionals. Viewers get a chance to look inside their own bodies and experience the wonder and respect for what it means to be human."

Prof. Dr. Hans-Martin Sass
*Kennedy Institute of Ethics
Georgetown University*

"Every physician, at one time or another is struck by the sheer elegance and intricacy of the human body. But, few laypersons get a chance to experience such wonder. This exhibit is a rare opportunity for the layperson to share in this privileged view of ourselves."

Dr. Neil S. Wenger, MD.
UCLA Medical Center