A working document for comparing several published sets of

Conservation and Restoration Guidelines

Compiled by John Watson, 1999-2007

Language from selected Codes of Ethics and Guidlines for Practice of various Organizations Interested in Historic Organs, Heritage Preservation and Conservation, collated by topic. John R. Watson, 1999-2007.

Table of Topics

Language from selected Codes of Ethics and Guidlines for Practice of various Organizations Interested in Historic Organs, Heritage Preservation and Conservation, collated by topic. John R. Watson, 1999-2007.

Table of Topics

A working document for comparing several published sets of

Conservation and Restoration Guidelines

Compiled by John Watson, 1999-2007

The following document indexes and collates twelve sets of conservation and organ restoration guidelines. Selected subjects, doctrines and issues are shown for comparison and are not comprehensive; each document includes at least some additional issues that were not indexed here.

The following documents are analyzed.

1. ICOM 1984. The International Council of Museums, Committee for Conservation, "The Conservator-Restorer: A Definition of the Profession." This document is published on the organization's website[1] and was associated with the ICOM *The Code of Ethics,* later updated in 2006.
2. CAC 1989. Canadian Association for Conservation. *Code of Ethics and Guidance for Practice,* Second Edition. The document is published on the CAC website.[2]
3. AIC 1994. American Institute for Conservation. *Code of Ethics and Guidelines for Practice.* The code, guidelines and an additional commentary is published on the AIC website.[3]
4. WR 1957/1970. Weilheimer Regulativ Richtlinien Zum Schutze Alter Wertvoller Orgeln. This is an expansion of a document first prepared in 1957 by a consortium of organ restorers. The 1970 revision is published in *Ars Organi* vol. 36, Berlin 1970. Carr (1994) reproduces the 1957 version in German and briefly summarizes parts of the 1970 version.
5. Dutch 1980. "The Organ Policy of the Dutch Office of Monuments" (Flentrop & Vente 1980) This policy has been replaced by general historic preservation legislation which shifts funding and decision-making from the national government to local councils. The current law is thus not specific about the treatment of organs, and gives specific restoration responsibility to localities.
6. RE 1981. "Richtlinien zur Erhaltung wertvoller historischer Orgeln," This is a booklet of 64 pages by Kristian Wegscheider and Helmut Werner. It is the 12th volume of a larger series titled *Studien zur Aufführungspraxis und Interpreation von Instrumentalmusik des 18.Jahrhunderts, 1981* published in East Germany. The document is the conclusion of a four-year trade school program specializing in restoration of historic musical instruments, for which the Museum für Deutsche Geschichte (Berlin) entered into a consultancy arrangement with the Karl-Marx University in Leipzig. Klaus Gernhardt's

[1] http://www.natmus.dk/cons/icom_cc
[2] http://www.cac-accr.ca/ehome.shtml
[3] http://aic.stanford.edu/pubs/ethics.html

foreword proposes the document as discussion material. This source also gives some historical background and critical summaries of earlier documents.[4]

7. OHS (1986). The Organ Historical Society (United States). *Guidelines for Conservation and Restoration.* This document appeared in its first edition in 1973. The 1986 revision was published in *The Tracker* and also appears on the organization's website.[5] A new revision is being planned at the time of writing.

8. Jakob (1990). "Basic Remarks about Organ Restoration" by Friedrich Jakob, translated by Fritz Noack. *ISO Information,* Nr. 32. This article touches on many important issues, but does not represent any organization's formal guidelines. The article was originally subdivided into nine parts. To simplify references, I have further numbered paragraphs so that 3.2 = part 3 the second paragraph.

9. BIOS (1991). The British Institute of Organ Studies published their in *??* in date ??.[6] The organization is made up of organ historians, builders/restorers, advisors, and musicians. The document has five numbered sections, number five being further divided into numbered subsections, 01 to 14. For precise reference, Table 1.5.2?? also subdivides the other sections by numbering the paragraphs. Thus 2.4 is the fourth paragraph of section two.

~~10.~~ This document is included in the table, but excluded from the full text database. ~~AIO 1995 "Associazione Italiana Organari," [see " codice deontologico"]in *L'Organo,* XXIX, 1995, pp181-195. A group of organ builders in Italy compiled this code of practice. It does not attempt to address philosophical issues, but consists of a set of rules about approaches to treatments. It emphasizes copying original workmanship and reconstruction of missing elements. Since the document lacks a numbered structure, the table uses page numbers for reference.~~

11. OHTA 1998 - *Pipe Organ Conservation and Maintenance Guide* by the Organ Historical Trust of Australia under the auspices of the NSW Heritage Trust (1998). It is published on the OHTA website.[7] According to the document's introduction, "The *Australian Pipe Organ Preservation Standards,* from which this guide is directly adapted, were originally drafted by John Stiller in 1978 and were based on the … Weilheimer Orgelregulativ (1970). Some amendments have been made to the text of the OHTA document to maintain conformity with the language and principles of the general heritage guidelines."

---

[4] Wegscheider and Werner (1981) section 2. For more recent critical reviews of such documents, see Carr, D.C. (1994) p.5-12; and Waanders (1997) p.208-211.

[5] http://www.organsociety.org

[6] [email question sent to David Knight 11-28-00]

[7] http://home.vicnet.net.au/~ohta/

~~12.~~ This document is included in the table, but excluded from the full text database. ~~PN 1998. "Per Una Normativa tecnica del restauro degli strumenti musicali," in *Conservazione e restauro degli organi storici,* Edizioni De Luca, Roma 1998. The document is divided into two sections. The first lists ten interventions that should not be done and are designated here as 1.i through 1.x. The second section gives guidelines. For the purposes of this index, the six paragraphs are numbered sequentially and are referenced as 2.i through 2.vi. In spite of its title, the document only refers to pipe organs. The document contains the deliberations of the national commission for the study of problems related to the restoration of historic organs. This was published in two versions, firstly by P.P. Donati in *Le fonti musicali in italia*, 1993, with Donati's own commentary. The 1998 version contains the text as formulated by the commission which included honorary inspectors and a representative from the Instituto Centrale per il Restauro.~~

The table indicates the location in which each document addresses the selected subject. Parentheses indicate that the cited passage addresses the issue only by implication, or refers to a closely related issue. Bulleted items are referenced as in the example 6.3•2, meaning section 6.3 bullet 2.

In the section after the chart, the specific references are quoted in full text, sorted by topic. Note that some of the very closely related "subjects" will have been combined.

Table 1.5.2: An Index of Issues in Published Conservation and Restoration Guidelines or Codes of Ethics
NOTE: Citation of an issue in a particular document does not necessarily indicate the document affirms the stated principle. In some cases, different documents address the same issue but with opposing instructions about it.

Conservation Codes of Ethics & Guidelines			**Subjects**	**Organ Restoration Guidelines**								
1 ICOM 1984 Inter-national	2 CAC 2000 Canada	3 AIC 1994 United States	⇐ **Documents** ⇒ ⇐ Region ⇒	4 WR (1957/ 1970) Germany	5 Dutch (1980) Nether-lands	6 RE 1981 Germany	7 OHS 1986 United States	8 Jakob 1990 Germany	9 BIOS 1991 Britain	10 AIO 1995 Italy	11 OHTA 1998 Australia	12 PN 1998 Italy
	G		**Definitions**			3.						
2.1, 3.2	I, G1, G2, G8, G10, G12		• *Conservation* or *restoration* or *preservation*			1, 3.4.2, 3.4.4	3		3.1, 4.1		1, 4	
1.2, 2.2, 3.7, 4.1, 4.2, 5	Intro, III, VI		• *Conservator* or *Restorer*; qualifications				3J		3.2, 5.01, 5.14		2.2, 3.5	
3.1	G3	Pre-amble	• *Historic; Cultural Property; Significance*	I	1	3.2	1	8.3	2, 5.05		(Intro)	Pre-messa[8]
	V		• Organ consultant; role		3.1, 3.4			(1.5)	3.2		7.1	
2.1, 3.6	G5	25	**Pre-Treatment Examination**	(II)[9]	3.3	3.6, 4.1		1.5, 1.6			4.3	2.iii
	11	16	• Justification for sampling, testing and examinations									
			Treatment									
	18		• Stylistic unity versus evolved state	V.1	4.5	1 (p8), 3.4.4	3C	(2.4), 8.4, 8.5, 9.4	1.3, 2.1, 4.1, 5	p185	4.1, 4.4, 6.3•2	2.ii
	16	21, 22	• Enable future treatment									
2.1	18	III, 21	• Allow for functional/aesthetic restoration.	V	4	3.4.4	3		4, 5	p184	4	Pre-messa
2.1	13, 20	21	• Allow for preservation through non-intervention						(4.3), 5.12			
	16	VI, 22	• Materials and methods: efficacy balanced with adverse long-term effects								(6.2•5)	
	18, 20	23	• Compensation for loss detectable			3.4.5, 4.2					3.4.2, 4	
		23	• Reversibility or removability		(4.6)	3.4, 4.2		9.8•2	4.2			2.iii
3.3	2, 13, 17,	21 (22)	• Limit or minimize extent of treatment		4		3(A), E, F		5		(4.5), (6.2)	1

[8] [(author's personal reminder) NW says "I wouldn't translate this. The items in the table give a reference to a document section – this document does not exist in English, the section is entitled "Premessa". Could be abbreviated to 'Prem.']
[9] According to Carr, D.C. (1994), the 1970 version greatly expands this issue.

1	2	3		4	5	6	7	8	9	10	11	12
	18										6.3•1	
	17	17	• Cautions about removing material		4	3.4.4, 4.2	3A, E, F	7.3, 9.8•1	4.2	(p185)	6.2	1.ix
			• Matching original material and workmanship		4.5d	4.2	3A,B,C, D,F,G	8.6	4.2, 5	p184, 185, 187-8	6.2•2	1.x
(3.6)			• Functional reintegration *encouraged*	V	4	1	3A,B,C, D,F,G	4, 7, 9	4.3	p187	2.3	
	3	V	• Single standard						(2.4)			
	2	II	• Responsibility to originator			3.4.5, 4.2			(2.4)	p184, 185		
	17		• Removal of alterations	V.2				8.5		(185)	4.4.1	2.iib
			• Cautions about making additions, alterations modernizations or coating	VI	4, esp. 4.6			7, 9.5	1.3, 5		5.2, 6.2, 6.3•3,•4	1.i-viii
	17		• Archival storage of removed materials or parts			3.4.3	(3H)		5.11	p185		
			• Avoid non-traditional materials			4.2			4.2	p184	6.4	
			• Prescribe procedures for maintenance, repair, or restoration	(III), (IV)	4	4.3			5	p188-195	2(M), 3(R),6.3,	
	IV, 7, 8, 21, 22, G9	VIII, 20	**Preventive Conservation**						3.3		(2.3)	
	4, G4	VII, 24	**Documentation**			3.5.1, 3.5.2, 3.6	(3I)				4.3	2.iii
	9, 11, 12	25	• of examinations, testing, analytical work								(4.3)	
	9, 12, G4.1	24, 25	• of condition before treatment			3.6		(3.3)	5.13	(p186)	3.6, (4.3)	2.iiib
	14	26	• of proposed treatments		3.1, 3.3	4.1		4.1, (5.1)	5.13		6.1	2.iiib
	4, 15, 17, 18, G4.3	VII, 27	• of specific interventions (current)			3.6			5.13	(p186)	4.3	2.iiib
	4	VII, 23	• of compensations for loss (current)								4.3, 5.1	2.iiib
	9, 17, G4.2	25	• of materials, structure, alteration evidence			3.6	(3I)	1.5			(4.3), (6.1)	2.iii
	9	24•3	• of specifications (organological or equivalent)	II.c	3.1	3.5	(3I)					2.iii
	2	25	• of historical background from documents		3.1	3.6, 4.1		1.1-1.4	5.13			2.iii
	IV, 7, G4.4	VIII, 24, 27	• for future care (preventive conservation recommendations)									
	4, 11	VII, 28	• for archival storage			3.6	(3I)		(5.13)			
	4, 15	26, 28	• for owners			3.6		4.1	5.13			
	VII, 30	(2), 24	• for professional literature				(3I)					
			Professional Conduct									
3.3, 3.5, 3.8	V, 5	IV, XI, 10	• Acknowledge personal limitations and special skills of colleagues and allied professionals			(1)						
	43	XII, 4a	• Personal health and safety standards									

1	2	3		4	5	6	7	8	9	10	11	12
	4, 30	X, 2	• Disclosure of procedures and materials for development of the discipline				3I					
	I, II, IV, VII, VIII, IX, 1, 2, 23, 24, 27, 28, 29, G4.5	IX, 7, 8, 9, 11, 12	• Guidelines for relationships between practitioner and owners, colleagues, and public	VII	3.4, Con-clusion	1, 4.1				(p181-182)		
	39	14, 15	• Cautions about conflicts of interest									
(2.2)	39	18	• Declaring age, origin or authenticity									
5	I, III, VI, 6	I	• Strive for professional excellence									
	10, 11, 14	5, 6	• Communication with owner; consent			4.1		4.1				
3.4	II	II, 21	• Conservator/Restorer must recognize significant elements and proceed accordingly			1 (p8)	3J	1.5			3.5	

Definitions 1

Comment Most of these definitions are repeated under the next four issue headings, which are more specific. In this section, we have the glossary as a whole from a few of the documents.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition G

Conservation:
All actions aimed at the safeguarding of cultural property for the future. The purpose of conservation is to study, record, retain and restore the culturally significant qualities of the cultural property as embodied in its physical and chemical nature, with the least possible intervention. Conservation includes the following: examination, documentation, preventive conservation, preservation, treatment, restoration and reconstruction.

Conservation Professional:
For the purposes o f this document, conservation professional refers to any person who has the education, knowledge, ability and experience to formulate and carry out conservation activities in accordance with an ethic al code such as this Code of Ethics and Guidance for Practice. The term, therefore, includes practising conservators (who are normally designated according to areas of specialization , e.g. paintings conservator, textile conservator, architectural conservator) as well as conservation scientists, conservation technicians, conservation educators, conservation managers and conservation consultants.

Cultural Property:
Objects that are judged by society, or by some o f its members, to be of historical, artistic, social or scientific importance. Cultural property can be classified into two major categories: 1. Movable objects such as works of art, artifacts, books, archival material and other objects of natural, historical or archaeological origin. 2. Immovable objects such as monuments, architecture, archaeological sites and structures of historical or artistic interest.

Documentation:
All of the records, written and pictorial, accumulated during the examination and treatment of a cultural property. Where applicable, documentation includes the examination records and report, treatment proposal, owner consent, the treatment records and report, the recommendations for subsequent care, samples taken from the cultural property and relevant correspondence. The purpose of documentation is:
* to record the condition of the cultural property;
* to record in formation revealed during examination or other conservation activities that assists in the understanding of the cultural property;
* to record the changes to the property due to conservation activities, and the justification for those changes;
* to provide information helpful to future care and treatment of the cultural property;
* to record agreements or understandings between the conservation professional and the owner; and
* to provide documents that can be made available if and when required for legal purposes.

Examination:
All activities carried out to determine the structure, materials, relevant history and condition of a cultural property, including the extent of deterioration, alteration and loss. Examination

also includes analyses and study of relevant material, as well as the study of relevant historical and contemporary information.

Originator:
For the purpose of this document, the originator is either: 1. The person(s) who designed or created the cultural property, or 2. The person (s) representing the creator or designer of the cultural property by legal, moral or spiritual right.

Owner:
For the purpose of this document, the owner is either: 1. The person(s) having legal ownership of the cultural property, or his/her authorized agent, or 2. The person(s), such as the museum director, curator, archivist or librarian, exercising professional custodianship over a cultural property.

Preservation:
All actions taken to retard deterioration of, or to prevent damage to, cultural property. Preservation involves management of the environment and of the conditions of use, and may include treatment in order to maintain a cultural property, as nearly as possible, in a stable physical condition. With respect to material valued exclusively for its information content, for example some archival material, preservation may include reformatting.

Preventive Conservation:
All actions taken to mitigate deterioration and damage to cultural property. This is achieved through the formulation and implementation of policies and procedures in areas such as lighting, environmental conditions, air quality, integrated pest management; handling, packing and transport, exhibition, storage, maintenance, use, security; fire protection, and emergency preparedness and response.

Reconstruction:
All actions taken to re-create, in whole or in part, a cultural property, based up on historical, literary, graphic, pictorial, archaeological and scientific evidence. Reconstruction is aimed at promoting an understanding o f a cultural property, and is based on little or no original material but clear evidence of a former state.

Reformatting:
All actions taken to transfer onto another medium, the information contained within a cultural property valued exclusively for its information content (for example, archival electronic media).

Restoration:
All actions taken to modify the existing materials and structure of a cultural property to represent a known earlier state. The aim of restoration is to reveal the culturally significant qualities of a cultural property. Restoration is based on respect for the remaining original material and clear evidence of the earlier state.

Treatment:
All direct interventions carried out on the cultural property with the aim of retarding further deterioration or aiding in the interpretation of the cultural property. A treatment may range from minimal stabilization to extensive restoration or reconstruction.

RE 1981 Wegscheider & Werner "Richtlinien..." 3

[Section 3 defines the following terms. See German text for definitions]

Valuable historic organs
Preservation
Measures (Treatment)
Care
Conservation
Reparation
Restoration
Reconstruction
Completions
Additions
Remodeling (modifications)
Dismantling
Inventorying
Documentation

Definitions: Conservation or restoration or preservation | 2

Comment A popular misconception in the organ field is to define conservation as a synonym for preservation. In fact, conservation involves preservation, but also interventive but preservation-minded restoration and stabilization. The AIC, CAC and perhaps the ICOM documents provide the best models.

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) IV

IV. Repairs
The purpose of repairs is to conserve endangered or deteriorating existing original material in the same way as the instrument originally was.

V. Restoration (reconstruction)
1. In general restoration aims at returning an existing condition to its former state, for which from a conservation point of view the best prerequisites are present.
2. During restoration, any repairs and additions that are uncharacteristic or in the wrong style should be removed.

BIOS 1991 British Institute of Organ Studies 3.1, 4.1

3.1. Conservation may be defined as work carried out to prevent decay. Even if an organ does not require restoration it may require careful attention to keep it in good order.

4.1. Restoration may be defined as the process of returning an organ to its original state, or to as near its original state as is possible, or to some other chosen earlier state. The word is often mis-used to cover various forms of rebuilding or alteration. In some cases a little altered instrument may be restored to its original state by a simple programe of cleaning, repair and adjustment. Other instances may require the reproduction of missing or damaged parts. In severe cases the whole organ may be rebuilt in the style of the original builder round some surviving material, in which case the work is likely to be of a more speculative nature, and should perhaps be termed reconstruction.

RE 1981 Wegscheider & Werner "Richtlinien..." 1, 3.4.2, 3.4.4

1. Another problem in choosing the right procedures for an organ is: should it be conserved or restored? Nowadays the tendency is more towards conservation (with restoration in exceptional cases), with maintenance and care as priorities. This is a logical consequence drawn from practice in the past. Formerly, valuable historic organs were either torn down or radically rebuilt. Then later on (and sometimes to this day) the rule was to restore “at any price”. Misplaced theories of the day were forcibly applied to organs in good condition, giving them a new tone. (This practice was also misguidedly applied to many baroque organs, e.g. Silbermanns)

3.4.2. Conservation means protection from deterioration. This includes cleaning, pest control, and elimination of minor technical deficiencies, while maintaining the piece’s former technical and tonal condition.

3.4.4. Restoration means returning an old and altered substance to an earlier condition for which there is evidence. In many cases it will no longer be possible to revert to the original (primary) condition. This should only be attempted if there is definite evidence of the primary state. When guesswork begins, restoration must stop. As a rule the aim is to return to the last complete and provable condition again. If remaining material is insufficient to do this or to reliably return to the original state, work should be limited to maintaining a playable instrument, or keeping the condition

it was found in. If enough of the instrument remains (e.g. pipes), it may be possible to approximate the original condition to a certain extent by reconstructing missing parts based on existing ones. But if, in dong so, a complete condition later in date than the original would be destroyed, measures taken should be verified according to the above-mentioned viewpoints (see section 3.2).

OHS 1986 Organ Historical Society Guidelines 3

3. Restoration may be defined as the process of returning an organ to its original state, provided always that sufficient original material remains to make this feasible. In some cases a totally unaltered organ may be in such basically good condition that simple repair and cleaning will accomplish this. If a substantial number of original components are missing and must be made anew the process is more properly termed reconstruction.

ICOM 1984 International Council Of Museums: Code of Ethics 2.1, 3.2

2.1 The activity of the conservator-restorer (to conservation) consists of technical examination, preservation, and conservation-restoration of cultural property:

Examination is the preliminary procedure taken to determine the documentary significance of an artifact; original structure and materials; the extent of its deterioration, alteration, and loss; and the documentation of these findings.

Preservation is action taken to retired or prevent deterioration of or damage to cultural properties by control of their environment and/or treatment of their structure in order to maintain them as nearly as possible in an unchanging state.

Restoration is action taken to make a deteriorated or damage to artifact understandable, with minimal sacrifice of aesthetic and historic integrity.

3.2 The documentary quality of the historic object is the basis for research in art history, ethnography, archaeology and in other scientifically based disciplines. Hence, the importance of preserving their physical integrity.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 1, 4

1. Conservation is the process of looking after an organ so as to maintain its heritage significance. In principle, conservation embodies all processes directed to this end (that is, including those listed below such as maintenance and restoration). In a specific sense, it also means preservation or preventative conservation: the steps taken to maintain an organ in its existing state and to prevent its deterioration.
In practical terms, the conservation of an organ can be ensured through the maintenance of favourable climatic and room conditions. If the room is heated, attention must be given to room temperature; regular control of the relative air humidity is also recommended, to prevent the wooden parts from drying out. Quick heating, stirring up of dust, and large temperature fluctuations are to be avoided. Wood-damaging insects must be combated by insecticides. In short, the best conservation often means leaving the organ itself alone but ensuring that it has a favourable environment and is maintained so that the need for restoration work does not arise.

4. RESTORATION AND RECONSTRUCTION
Together with preservation (see Conservation), these are the main processes associated with work which is needed to return an organ to a former higher standard.
Restoration is the returning of an altered instrument to an earlier documented condition by removing additions or by reassembling existing components without the introduction of new material

(excepting, in the case of an organ, the components which perish with the working of the instrument such as felt, leather, wire and ivory or their acceptable substitutes).
Reconstruction is the returning of an altered instrument to as near as possible to an earlier documented condition and is distinguished from restoration by the introduction of lost or missing materials (new or old) into the organ. New material should be clearly distinguishable from the original, by labeling or documentation if necessary. [See also 5.1 Conjectural construction.]

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition I, G1, G2, G8, G10, G12

I: It is the responsibility of the conservation professional, acting alone or with others, to strive constantly to maintain a balance between the need in society to use a cultural property, and to ensure the preservation of that cultural property.

Conservation: All actions aimed at the safeguarding of cultural property for the future. The purpose of conservation is to study, record, retain and restore the culturally significant qualities of the cultural property as embodied in its physical and chemical nature, with the least possible intervention. Conservation includes the following: examination, documentation, preventive conservation, preservation, treatment, restoration and reconstruction.

Conservation Professional: For the purposes of this document, conservation professional refers to any person who has the education, knowledge, ability and experience to formulate and carry out conservation activities in accordance with an ethic al code such as this Code of Ethics and Guidance for Practice. The term, therefore, includes practising conservators (who are normally designated according to areas of specialization , e.g. paintings conservator, textile conservator, architectural conservator) as well as conservation scientists, conservation technicians, conservation educators, conservation managers and conservation consultants.

Preservation: All actions taken to retard deterioration of, or to prevent damage to, cultural property. Preservation involves management of the environment and of the conditions of use, and may include treatment in order to maintain a cultural property, as nearly as possible, in a stable physical condition. With respect to material valued exclusively for its information content, for example some archival material, preservation may include reformatting.

Reconstruction: All actions taken to re-create, in whole or in part, a cultural property, based up on historical, literary, graphic, pictorial, archaeological and scientific evidence. Reconstruction is aimed at promoting an understanding of a cultural property, and is based on little or no original material but clear evidence of a former state.

Restoration: All actions taken to modify the existing materials and structure of a cultural property to represent a known earlier state. The aim of restoration is to reveal the culturally significant qualities of a cultural property. Restoration is based on respect for the remaining original material and clear evidence of the earlier state.

Definitions: Conservator or Restorer; qualifications | 3

Comment The restorative conservation of organs could benefit greatly by a collaborative approach involving organ and other craft specialists as well as conservation specialists. Defining who is qualified to restore organs is highly problematic: As we can see in various old guidelines from organ groups, the qualified practitioner so narrowly defined that a specialized conservation professional scarcely be considered a legitimate part of the team. Consider not including this topic.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 2.2, 3.5

2.2 All work connected with the maintenance of an organ should be carried out by professionals. This work should remain in the hands of one person or firm and it should be governed by contract.

3.5 For any repair work, section 2.2 above is to be strictly adhered to. Therefore, only an organbuilder who possesses a personal and professional guarantee that the work will be carried out faultlessly in accordance with the assessment of significance may be entrusted with repair work on historic organs. Above all, the organbuilder must have experience in the type of work to be undertaken.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition Intro, III, VI

Intro: The fundamental role of the conservation professional is to preserve and to restore, as appropriate, cultural property for present and future generations. The following are principles of ethical behavior for those involved in the conservation of cultural property:

III. The conservation professional shall strive to attain the highest possible standards in all aspects of conservation , including preventive conservation*, examination*, documentation*, research, treatment* and education.

IV. The conservation professional shall seek to prevent damage and deterioration to a cultural property under his/her care by implementing, or by recommending to the owner, appropriate preventive conservation measures.

BIOS 1991 British Institute of Organ Studies 3.2, 5.01, 5.14

3.2. An historic instrument should be maintained by a skilled professional. When choosing an organ builder to tune and maintain the instrument, it is advisable that the choice should be made bearing in mind his experience and reputation in workshop work with historic organs. The recommendations of an organ builder should be taken seriously. However, there is the possibility that they may be motivated by the prospect of financial reward, and impartial expert advice should be sought where necessary.

5.01. Pipe work should be carefully repaired, always by an expert pipemaker. Replacements for missing pipes should be made of similar materials and similar details of construction as the original. The original means of tuning should be preserved where this survives. If it does not survive it may be restored provided that this requires no further alteration to the pipes. Tuning slides should not be fitted if this involves the cutting of any pipe, nor, if they are fitted, should they be removed when this would require the lengthening of many pipes. Effort should be made to discover the original pitch and temperament of the organ and to restore this when possible. Voicing should be limited to the regulation of repaired pipes in the voicing of any replacement pipes in the style of the originals.

5.14. The restoration of historic organs should always be carried out by a professional specializing in work on the type of organ involved, and should never be entrusted to amateurs. For the sake of the owner's own investment as well as the preservation of the organ, it is incumbent on the owners of organs and their advisers to investigate the reputation, previous work and references of any perspective restorer. A fine or historic organ may be irreparably damaged by incompetent or unqualified workers, but a well restored historic organ can be a musical treasure and a legacy to future generations.

OHS 1986 Organ Historical Society Guidelines 3J

3J. Restoration of historic organs should always be done by an experienced professional restorer specializing in work on the particular type of organ involved and never entrusted to unsupervised amateurs. For the sake of the owner's own financial investment as well as the preservation of the organ, it is incumbent upon the owners of historic instruments to thoroughly investigate the reputation, previous work, and references of any prospective restorer. Quality of work, rather than price, should be the criterion in the choice of a restorer. A fine and historic organ may be irreparably altered or damaged by incompetent or unqualified workers but a well-restored historic organ can be a musical treasure and a legacy to future generations.

ICOM 1984 International Council Of Museums: Code of Ethics 1.2, 2.2, 3.7, 4.1, 4.2, 5

1.2 In most countries, the profession of the conservator-restorer is still undefined: whosoever conserves entry stores is called a conservator or a restorer, regardless of extent in depth of training.

2.2 Conservator-restorer work in museums, in official heritage protection services, in private conservation enterprises or independently. Their task is to comprehend the material aspect of objects of historic and artistic significance in order to prevent their decay, and to enhance our understanding of them so as [to] further the distinction between what his original and what is spurious.

3.7 The conservator-restorer works on the object itself. His work, like that of the surgeon, is above all a manual art/skill. Yet, as in the case of the surgeon, manual skill must be linked to theoretical knowledge and the capacity simultaneously to assess the situation, to act upon it immediately and to evaluate its impact.

4.1 The conservator-restorer's professional activities are distinct from those of the artistic or craft professions. A basic criterion of this distinction is that, by their activities, conservator-restorers did not create new cultural objects. It is the province of the craft and artistic professions such as metalsmiths, guilders, cabinmakers, decorators, and others to reconstruct physically what no longer exists well what cannot be preserved. However, they to can benefit immeasurably from the findings of conservator-restorers, and from their guidance.

4.2 The recommendation as to whether intervention on any object of historic and/or artistic significance should be undertaken by an artist, a craftsman, or a conservator-restorer can be made only by a well-trained, well-educated, experienced and highly sensitive conservator-restorer. This individual alone, in concert with the curator or other specialists, has the means to examine the object, determine its condition, and assess its material documentary significance.

5. [this section goes into detail about what constitutes the training and education of a conservator-restorer]

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) III

III
The upkeep of instruments worth preserving should only be entrusted to organ builders. Only they can reliably undertake the identifiable care and preservation of an instrument as it is meant to be done.
The organist should also be the caretaker of the organ.

Definitions: Historic; Cultural Property; Significance | 4

Comment If a very generalized definition is not given for preservation worthiness, any guidelines would loose its reason for being, for if significance cannot be articulated at all, why talk about conservation? Past documents from organ groups have tended to be far too specific about the parameters of significance. As Paul Philippot wrote, significance depends upon the ever-changing "historical consciousness and the culture of the people involved." (_Historic Preservation_, 369). It is thus very appropriate that every generation should re-examine what it feels should be preserved. Have a particular look at the language used by AIC, CAC, and ICOM.

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) I

I. The term "organs worthy of historic preservation"
1. In this category are organs and organ-like instruments belonging to a definite style period that comply with particular conditions regarding external appearance (facades) and/or the instrument.
2. The artistic merit decides whether the organ is worthy of preservation.
3. For the piece to qualify as preservation worthy, it is generally required that the instrument must have (Tonkanzellenwindladen), mechanical (Traktur) and original number of pipes. But even those instruments that only partially comply with these prerequisites can be recognized as having tonal qualities worthy of preservation.
4. More recent organs (or organ-like instruments) can also be considered preservation worthy if these are particularly unusual instruments that produce a specific tonal quality for the time of their construction, even if such instruments do not possess (Tonkanzellenladen)or mechanical (Traktur).

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice Preamble

Preamble: ... Cultural property consists of individual objects, structures, or aggregate collections. It is material which has significance that may be artistic, historical, scientific, religious, or social, and it is an invaluable and irreplaceable legacy that must be preserved for future generations.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide (Intro)

INTRODUCTION
Pipe organs are a unique and very significant part of the heritage of Australia and the country is well known internationally for its extensive collection of these instruments. The Pipe Organ Conservation and Maintenance Guide is designed for owners, users and conservators of pipe organs. The organ is a very specialised heritage item - primarily a musical instrument but also part-machine, part-decorative furniture and part of the form of a building. The detailed conservation of organs cannot be guided exclusively by the general conservation charter for heritage items in Australia, the ICOMOS Burra Charter, which addresses places (see Further Reading). The present guide is linked to the fundamental principles of the general heritage guidelines but adapts these principles to the unique circumstances of the organ. Unlike the earlier version, however, it seeks to achieve greater conformity with universal heritage principles by linking more closely the general heritage guidelines with the specific and long-practised principles of organ conservation.
These pipe organ guidelines address conservation and maintenance only. Assessment of significance is the first step in the process of managing an organ and must be undertaken in order to guide subsequent conservation and maintenance work. The Burra Charter, supported in NSW by the NSW Heritage Manual and Caring for Heritage Objects (see Further Reading), should be used to help assess significance and a conservation management plan should be produced to guide conservation. (Bear in mind that this assessment should address all aspects of an organ, from its musical quality to its historical, social and aesthetic contexts in the building and community in which it resides.)

This process has barely commenced with pipe organs in Australia and much existing assessment is too narrow in scope. However, there is a good body of information in earlier technical documentation undertaken by the Organ Historical Trust of Australia (OHTA) and other published historical studies (see Further Reading).

BIOS 1991 British Institute of Organ Studies 2, 5.05

2. Organs to be regarded as worthy of conservation or restoration:

2.1. The significance of an old organ increases with its age, rarity, and the extent to which it remains in its original state. Broadly speaking, any unaltered organ by a well-respected builder should be maintained in or restored to its original state, or a state as near the original as possible, without any concession to modern taste being felt necessary. If restoration to the original state is impossible, the instrument may be restored to a chosen former state, usually decided as being that state which the organ last represented, in a coherent and recognizable way, the work of one builder or school of builders.

2.2. Organs of any size from the 17th, 18th or first half of the 19th centuries in any state of preservation are now so rare and that such historic importance that their preservation, and, if necessary, faithful restoration, should be assumed as a matter of course. Organs of the period 1850 to 1920 survive in somewhat greater numbers, but again their preservation and restoration should normally be the rule. Organs from 1920 onwards may not be historic as such, but nevertheless major unaltered examples of the work of good builders should be preserved in their original state.

2.3. Organs that have been so radically altered tonally or musically that they no longer represent the style of the original builder may be of lesser interest, though some such instruments may still contain important historical material worthy of preservation. Any pipe work or mechanism more than a hundred years old should be considered for preservation according to its merits.

2.4. Organs, like other musical instruments, are works of art. The most significant examples rank alongside famous violins and paintings by great masters, though as they are fixtures and not often marketable, their monetary value may not reflect this. Even the most humble examples represent great care and skill on the part of their makers, and the temptation to alter them to conform to tastes in playing that the maker did not invisage, should be avoided. Nor should it be imagined that the non-sounding parts of the organ are just mechanism, and can be changed at will; each part has a vital role in affecting the way the instrument can be played, and therefore the way it will sound.

5.05. Electro-pneumatic and electric actions: At the time of writing, relatively few organs with electropneumatic or electric action are regarded as historic. However, some examples from before about 1940 may be of considerable interest as examples of early electrical engineering, and specialist advice should be sought before discarding switchgear etc. from this period.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 1

What are the procedures through which organs are accepted in this register as monuments?
The following criteria are applied:
1. All organs, more or less in their original condition from before 1850.
2. Organs from 1850-1890 if the organ is almost or completely in its original condition; preference is given to the organs situated in suitable surroundings, possibly of the same historical or artistic period.
About 500 organs in Holland have been recognized as monuments and have found a place in the official register.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.2

3.2 [Valuable historic organs are defined, and fall into two groups, mechanical and pneumatic/electric. Questions are listed to define if an organ is/is not worth preserving.]

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition G3

Cultural Property: Objects that are judged by society, or by some of its members, to be of historical, artistic, social or scientific importance. Cultural property can be classified into two major categories: 1. Movable objects such as works of art, artifacts, books, archival material and other objects of natural, historical or archaeological origin. 2. Immovable objects such as monuments, architecture, archaeological sites and structures of historical or artistic interest.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 8.3

What, after all, is worthy of historic preservation? Present artistic creativity, certainly not, people everywhere seem to agree. Usually a period of about fifty years has to elapse. This, of course, hides the generation problem: what father created is wrong and not worthy of preserving; what grandfather, however, created, the grandchild accepts and honors. This "safety period" continually or incrementally advances with time. Thus, today, organs with cone-valve chests, even straight pneumatic or electric instruments with pipe fences of zinc for cases, are recognized as historical monuments. This is an incomprehensible horror for today's aged fighters of the organ reform movement, who are unable to participate in this change of values. A similar fate is in store for us. Always new, supposedly "decadent" periods of creativity will become "worthy monuments" and the organbuilder has to keep up with change to keep afloat. So much about the choice of restoration objects.

ICOM 1984 International Council Of Museums: Code of Ethics 3.1

3.1 the conservator-restorer has a particular responsibility in that treatment is performed on irreplaceable originals, which are often unique end of great artistic, religious, historic, scientific, cultural, social or economic value. The value of such objects lies in the character of their fabrication, in their evidence as historical documents, and consequently in their authenticity. The objects "are significant expression of the spiritual, religious, and artistic life of the past, often documents of historical situation, whether they be work of the first rank or simply objects of everyday life" [see document for quotation footnote.]

OHS 1986 Organ Historical Society Guidelines 1

1. To Be Regarded as Historic:

A. Any organ or organ case in the United States which was built prior to 1850 may be said to be of major historic importance. Its significance increases with its age, its rarity, and the extent to which its components remain in unaltered condition.

B. Any substantially unaltered organ built prior to 1900 which is an outstanding example of a particular style or of a particular builder's work, or is unique in some other way (e.g., the only remaining example of a particular builder's work).

C. The above criteria may also be applied to certain 20th-century organs, especially if they represent important periods in a given builder's work, or milestones in the development of a particular style.

D. Instruments which have been so radically altered tonally and/or mechanically that they no longer represent the style of a period or the original builder may be regarded as having minimal historic importance, even though such instruments may still contain older material.

Definitions: Organ consultant; role | 5

Comment Would it be better not to define the organ consultant per se, but to encourage a generally collaborative approach involving...(and list various specialties that could potentially inform the restoration)?

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob -1.5

[On identifying preservation-worthy evidence] In principle I would not keep any consultant from doing this, but it appears much more likely to be an organbuilder's task [than that of a consultent] because the eyes of an elert and experienced craftsman usually see more than do the eyes of even the most intelligent person more at home with office desks and organ consoles.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 3.1, 3.4

3.1
Consultant
the owner, usually a church, appoints a professional consultant. This consultant must be chosen from the limited number of consultants recognized in accepted by the government. He is paid by the church; but his salary and his expenses are part of costs of restoration and are therefore subsidized by 90% as well.

The consultant makes a historical report. If the situation happens to be very complicated, a complete inventory is made before any plans are formed. Among other things this means detailed measuring of scales and careful copying of all inscriptions found on the pipes.

After this has been done a restoration plan is made in close cooperation with the government expert.

3.4
Responsibilities
The consultant or expert for the owner of the organ is responsible for steady progress of the work, the regular contact between all concerned, and especially for communication with the government's expert.

In addition, there is a yearly meeting of the "Organ Restoration Circle", which is comprised of the government expert, independent experts, and organ builders. In this annual exchange, problems of recent restorations are discussed in data presented for the common benefit.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 7.1

7.1 An organ consultant should be engaged in any conservation project (other than maintenance) for any organ of heritage significance. The consultant can also investigate the significance of the organ beforehand, if necessary, and prepare a conservation management plan and can, of course, advise on a maintenance program. The NSW Heritage Office can provide a list of consultants in that state. The Organ Historical Trust of Australia can also be contacted for advice regarding consultants (see Contacts).

BIOS 1991 British Institute of Organ Studies 3.2

An historic instrument is to be maintained by a skilled professional. When choosing an organ builder to tune and maintain the instrument, it is advisable that the choice should be made bearing in mind his experience and reputation in work with historic organs. The recommendations of an organ builder should be taken seriously. However, there is the possibility that they may be

motivated by the prospect of financial reward, and impartial expert advice should be sought where necessary.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition V

V. The conservation professional shall recognize his or her limitations and the special skills and knowledge of others.

Pre-Treatment Examination | 6

Comment Many of the guidelines offer some useful language on this subject.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition G5

G5: Examination: All activities carried out to determine the structure, materials, relevant history and condition of a cultural property, including the extent of deterioration, alteration and loss. Examination also includes analyses and study of relevant material, as well as the study of relevant historical and contemporary information.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 4.3

4.3 Before restoration or reconstruction, a thorough detailed documentation of the organ should be undertaken before the instrument is dismantled. On the basis of this documentation, a work program will be scheduled, which can be adapted to any new factors which may become apparent when the organ is dismantled. The course of the work must be thoroughly recorded in a written report. There may be a need for review of the conservation management plan if significant new information is revealed during dismantling.

ICOM 1984 International Council Of Museums: Code of Ethics 2.1, 3.6

2.1 The activity of the conservator-restorer (to conservation) consists of technical examination, preservation, and conservation-restoration of cultural property: ... Examination is the preliminary procedure taken to determine the documentary significance of an artifact; original structure and materials; the extent of its deterioration, alteration, and loss; and the documentation of these findings.

3.6 An intervention on an historic or artistic object must follow the sequence common to all scientific methodology: investigation of source, analysis, interpretation and synthesis. Only then can the completed treatment preserve the physical integrity of the object, and make its significant accessible. Most importantly, this approach enhances our ability to the site for the object's scientific message and thereby contribute new knowledge.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.6, 4.1

3.6 Documentation [This is a documentation of condition, work already carried out, noting materials used and reversibility. Before and after photos should be included as well as sound recordings. A logbook is recommended. Copies of literary sources should be included.]

4.1 Procedure
This concerns work other than general maintenance:
* The owner will contact the organ-builder,
* and the latter will examine the organ
* A work plan is established by the organ-builder
* Experts are designated by owner and monument protection society
* Archives are studied by experts and organ-builder
* They will inspect the organ
(Here follows a description of all administrative work and fund raising to be done before work can begin; any complex decisions are to be discussed with the experts)

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 1.5, 1.6

1.5:
The next step, which of course also could be the first step, is the precise inspection and researching of

the instrument itself. In principle I would not keep any consultant from doing this, but it appears much more likely to be an organbuilder's task because the eyes of an elert and experienced craftsman usually see more than do the eyes of even the most intelligent person more at home with office desks and organ consoles. But even the organbuilder has to make every effort to proceed like a clever detective. It is certainly in order to preserve as well as to secure any clue as if it were criminal evidence. Old nail holes, shadow marks, glue traces and things like that start to speak when asked correctly. For specific individual questions, my experience has been that indeed it makes sense to ask the crime laboratory of the police for help. With a reasonable request, usually these facilities will be happy to cooperate. Let me mention a few practical examples:
* To reveal and photograph faded inscriptions (Ultraviolet and infrared photography, x-ray pictures, flurooscope pictures, etc.);
* Age determination of paper, paint, glues.
* Determination of the identity of markings or papers (for example, identical red crayon used in dated inscription and the marking of wood pipes; paper glued to bellows and chest bottoms originating from the same batch).

1.6:
For age determination of wood (dendrochronology or the C-14 method) as well as metal analysis, on the other hand, commercial or university material testing labs are better suited, though often more expensive.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 25

25. Documentation of Examination: Before any intervention, the conservation professional should make a thorough examination of the cultural property and create appropriate records. These records and the reports derived from them must identify the cultural property and include the date of examination and the name of the examiner. They also should include, as appropriate, a description of structure, materials, condition, and pertinent history.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 3.3

Definitive Order: The historical reports, the restoration plan and the builders price go along with the application for a subsidy from the government. After the government has granted the subsidy, the organ builder will receive the first payment, which will make the order definite.

Only after the instrument has been dismantled, are the fine details of the restoration plan worked out. Clearly, there are many important decisions that must be postponed until after the contract is been signed in the instrument taken apart for examination.

Pre-Treatment Examination: Justification for sampling, testing and examinations 7

Comment As you can see, this is a relatively minor issue among conservation specialists, and off the radar for organ restorers. Ignore till the next edition?

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 11

11. Sampling. In cases where sample material must be taken from a cultural property, prior consent must be obtained from the owner. Only a minimum of sample material shall be removed, and a record of sample removal shall be kept. Where relevant, and with the agreement of the owner, material removed from a cultural property should be retained as par t of the documentation of that cultural property.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 16

16. Justification: Careful examination of cultural property forms the basis for all future action by the conservation professional. Before undertaking any examination or tests that may cause change to cultural property, the conservation professional should establish the necessity for such procedures.

Treatment: Allow or encourage restoration; Allow for preservation through non-intervention 8

Comment When is restoration of a non-functional historic organ a fundamental responsibility, and is it ever advisable to preserve a particularly rare instrument in non-playing state so restorative alterations do not threaten the rarest of historic evidence? Only the conservation documents mention preservation through non-restoration.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 4

[This document presumes restoration for historic organs and does not mention preservation through non-restoration]

BIOS 1991 British Institute of Organ Studies (4.3), 5.12

4.3 Certain organs that have been greatly altered may be incapable of restoration. If returning the instrument to a former state would involve considerable speculative reconstruction and/or considerable further alteration to the original material, then restoration should not be carried out. In the case of derelict organs, this may mean that they remain silent.

5.12 Financial restrictions, partial restoration: When financial limitations prevent all of a restoration project being carried out immediately, it is almost always advisable to wait until sufficient funds have accumulated to carry out the work in one go. If an organ is restored in stages, it will decay in stages, and work will be necessary indefinitely. An unrestored organ, though disappointing, will usually be preferable to a half-finished restoration. The absence of any restoration may not be a bad thing: many historic instruments have been preserved through disuse, though this should not be confused with decay.

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) V

V. Restoration (reconstruction)
1. In general restoration aims at returning an existing condition to its former state, for which from a conservation point of view the best prerequisites are present.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice III, 21

III. While recognizing the right of society to make appropriate and respectful use of cultural property, the conservation professional shall serve as an advocate for the preservation of cultural property.

21. Suitability: The conservation professional performs within a continuum of care and will rarely be the last entrusted with the conservation of a cultural property. The conservation professional should only recommend or undertake treatment that is judged suitable to the preservation of the aesthetic, conceptual, and physical characteristics of the cultural property. When nonintervention best serves to promote the preservation of the cultural property, it may be appropriate to recommend that no treatment be performed.

ICOM 1984 International Council Of Museums: Code of Ethics 2.1

2.1 The activity of the conservator-restorer (to conservation) consists of technical examination, preservation, and conservation-restoration of cultural property: Preservation is action taken to retired or prevent deterioration of or damage to cultural properties by control of their environment and/or treatment of their structure in order to maintain them as nearly as possible in an unchanging state.

OHS 1986 Organ Historical Society Guidelines 3, A,B,C, D,F,G

3. Restoration may be defined as the process of returning an organ to its original state, provided always that sufficient original material remains to make this feasible. In some cases a totally unaltered organ may be in such basically good condition that simple repair and cleaning will accomplish this. If a substantial number of original components are missing and must be made anew the process is more properly termed reconstruction.

3A. In general, all extant original components should be preserved and properly repaired. Severely damaged components may be replaced by new if incapable of being put into reliable working order and missing parts replaced by reproductions. All replacement parts should conform as closely as possible to the originals with regard to materials and method of construction.

3B. Pipework should be carefully repaired by a professional pipemaker, replacements for missing pipes being made of the same material and construction details as the originals. The original means of tuning should be preserved wherever possible. An effort should be made to ascertain the original temperament and restore it. Voicing should be limited to the re-regulation of repaired pipes and the voicing of any replacement pipes in the style of the remaining originals.

3C. Keyboards, stop controls, and other console components should be kept in, or restored to, their original condition. A possible exception may occur in cases where the extension of a short pedal-board compass is necessary to the continued acceptance and use of an organ. Key and stop action should always be restored in such a way that any new materials conform to the original materials.

3D. Slider and pallet windchests should be very carefully restored and checked for soundness. When replacement of pallet covering is necessary, it should be with material corresponding to the original.

3F. Original bellows, reservoirs, wind trunks, concussion bellows, and other components which determine the wind characteristics of an organ should always be retained and releathered; if missing they should be replaced by new components conforming to the originals. Chest-mounted "schwimmers" should not be added to organs not originally having them, nor springs added to a bellows which was originally weighted. Tremulants should be restored and adjusted; if replacement is necessary, it should conform to the style of the original. Feeder mechanisms, where extant, should be restored and made operable when feasible. The retention or addition of a modern electric blower does not detract from the historical value of an organ if installed with as little alteration to the original winding components as possible, but it is recognized that there is a discernible difference between fan-blown and hand-raised winding systems in organs which have both.

3G. If the original finish of an organ case has been altered, an effort should be made to determine the nature of the original finish and to restore it whenever feasible. The same is true of front pipes, particularly those which were originally decorated in polychromed designs but have since been painted over. In repairing dame to case woodwork, particularly in unpainted cases, care should be taken to match new wood to old.

RE 1981 Wegscheider & Werner "Richtlinien..." 1, 3.4.4

[this document generally assumes functional restoration, except possibly for some museum instruments]
1. How should an organ-builder proceed? He is the one responsible for upkeep, restoration or reconstruction, to mention only a few. In the case of smaller organs belonging to museums, such problems do not arise. Here the only risk-free solution is chosen: to remain true to the original in the

smallest detail. This procedure ought to be the one opted for regarding other types of organ, but it is not always feasible. Most of them are in regular use and must follow demands set by present-day practical and musical requirements.

3.4.4. . . .As a rule the aim is to return to the last complete and provable condition again.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 4

4. RESTORATION AND RECONSTRUCTION
Together with preservation (see Conservation), these are the main processes associated with work which is needed to return an organ to a former higher standard.

Restoration is the returning of an altered instrument to an earlier documented condition by removing additions or by reassembling existing components without the introduction of new material (excepting, in the case of an organ, the components which perish with the working of the instrument such as felt, leather, wire and ivory or their acceptable substitutes).

Reconstruction is the returning of an altered instrument to as near as possible to an earlier documented condition and is distinguished from restoration by the introduction of lost or missing materials (new or old) into the organ. New material should be clearly distinguishable from the original, by labeling or documentation if necessary. [See also 5.1 Conjectural construction.]

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 4, 7, 9

[This document presumes restoration for historic organs and does not mention preservation through non-restoration]

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 13, 18, 20

13. Necessity and Extent of Treatment
The conservation professional shall only recommend or undertake treatment that is necessary to, and appropriate for, the conservation of the cultural property. Conversely, a conservation professional shall not intentionally omit to recommend an essential treatment. When nonintervention best serves to promote the preservation* of the cultural property, it is appropriate that no treatment be performed.

18. Restoration* and Reconstruction*
Restoration and reconstruction are means of re-establishing culturally significant qualities of a cultural property. If undertaken they shall be fully documented and shall be carried out without fraudulent intent and to the minimum extent necessary. The presence and extent of any restoration or reconstruction must be detectable, though they need not be conspicuous.

20. Reproduction or Detailed Recording
When a cultural property is inherently unstable or when its social use is incompatible with its preservation, the conservation professional shall recommend a reproduction or a detailed recording as appropriate to the situation. The conservation professional shall outline suitable options that meet the need for content retention and that will result, during the reproduction or recording, in the least alteration to the original. A reproduction shall be clearly and easily identified as such.

Treatment: Archival storage of removed materials or parts | 9

Comment If old but unserviceable materials have to be removed from an organ during restoration, should they be not only documented but physically preserved in storage? If we agree that historical evidence exists on and within historic components, then we should encourage such preservation, even if it is to save samples.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.4.3

3.4.3. Only really faulty and irreparable parts should be changed. To do this, the same methods as the original organ-builder would have used should be chosen. Any original parts that have been removed should be conserved and either kept inside the organ or in safely in a nearby room. They serve as documentation. It is quite possible that future restoration technicians could make use of these again (reversibility).

OHS 1986 Organ Historical Society Guidelines (3H)

{3H}. In instances where financial or other considerations dictate that some original part of the organs be removed or left unrestored (e.g., a badly damaged set of pipes, or feeders and blowing handle) these should be packed up and stored in a safe part of the building, properly labeled as to their significance. The same applies when on the insistence of the owner some original part (such as a short pedalboard) is replaced.

BIOS 1991 British Institute of Organ Studies 5.11

All original parts not used in the restoration should be carefully labeled, packed, and stored in safety in the organ or as near to it is possible.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 17

17. Removal or Alteration of Material
No aspect of a cultural property should be altered nor should material be removed from it without justification. When such removal or alteration is required, those aspects or materials shall first be documented in their existing state. Where relevant, and with the agreement of the owner, material removed from an object shall be retained as part of the documentation of a cultural property.

Treatment: Avoid non-traditional materials 10

Comment There is a strong reason for following tradition in many aspects of restoration, especially when choosing methods that affect appearance. But why might we consider using materials in restoration other than the ones used by the original maker? Perhaps surprisingly, some traditional materials that have withstood the test of time can nevertheless destabilize the aged and preservation-worthy materials nearby or be unnecessarily intrusive. Conservation scientists have greatly expanded the options for coatings, adhesives, consolidants, corrosion inhibitors, cleaning agents, colorants, and solvents. Materials gain acceptance for conservation after testing for their long-term stability, effectiveness, removability, and their affect on the historic materials on which they are applied. As in the development of new medications, thorough testing for a material's effectiveness and its potential short- and long-term side effects insure the health and safety of artifacts and their documentary content. In another parallel with medicine, restoration materials and methods of a century or two ago are not validated by tradition alone, but continually must meet new standards of preservation.

We should strongly consider condoning (or at least not forbidding) the use of non-traditional materials when such use enhances preservation without detracting from period appearances.

RE 1981 Wegscheider & Werner "Richtlinien..." 4.2

Additions and reconstruction should be made out of similar materials and constructed in the same way as the organ-builder originally intended. If there are no other examples (such as another organ built by the same person) then some simple appropriate form should be chosen.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 6.4

6.4 In the conservation of significant organs the use of traditional materials is preferred. However, organs are working heritage items and in some instances the introduction of modern materials may be unavoidable and may be done under professional guidance. For example, various synthetic resins may be substituted for ivory and selected grades of alternative timber can be used where the original type of timber in a suitable size is unavailable.

BIOS 1991 British Institute of Organ Studies 4.2

All original components should be preserved and properly repaired. Components that have been severely damaged or altered beyond repair, and are incapable of being put into reliable working order, may be replaced by reproductions. All repairs and replacement parts should be made in a manner consistent with the original work, both in materials used and method of construction. Any repairs or changes necessary during the course of restoration should be reversible, in case it be found at a later date that the work needs to be done again, either through further wear or deterioration, or because the original restoration was defective or that techniques have advanced since restoration took place.

Treatment: Cautions about making alterations and modernizations 11

Comment This one may take some discussion, as it is a particularly hot and controversial topic in organ circles. It is interesting to note that the subject is not even mentioned in the extensive conservation documents, because this is simply so far from the ideals of conservation that it is a non-issue. We might consider making clear that any form of modernization is neither conservation nor restoration, but adaptation. Where adaptation is deemed unavoidable in a preservation-worthy organ, it should be executed using "minimally intrusive" methods, and aspire to reversibility.

BIOS 1991 British Institute of Organ Studies 1.3, 5

1.3. BIOS believes that the musical success of a good organ is due to a happy combination of the builder's skill and the particular date of construction. Subsequent alterations to keep pace with changes in fashion, whether to pipes or mechanism, will weaken the builder's original artistic concept and make the organ a less good musical instrument than before. Where no alterations have been made, they should be avoided; where alterations have been made, they should be reversed if this is reasonable.

5. The following paragraphs deal specifically with some of the technical problems to be found in restoration. While no document of this kind can hope to provide the right solutions to every problem, the examples given generally illustrate the kinds of methods that will lead to a successful restoration. [There follows sections on pipe work, console and fittings, mechanical key action, pneumatic key action (including pneumatic lever actions), electoral-pneumatic and electric actions, stop and combination actions, slider soundboards, sliderless chests, winding systems, casework, etc.]

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 7, 9.5

7. A restoration often brings the opportunity to improve an organ at the same time. One should take advantage of these opportunities. Be careful, though, to decide what may or should be considered an improvement. Of course we are not talking here about the fulfilling of additional organist's requests like the addition of more stops or the adoption of AFO standards. When guidelines for restorations sensibly say "any improvements are to be avoided," they refer to these kinds of requests.

In reality, we often see that not all improvements are evil; some are actually quite necessary. I'm thinking here specifically of structural necessities. For instance, on the gallery Positives, Gabler sawed off a corner bracket of the case because he had no other room for the action. Consequently, over the years the two Positive cases tilted more and more towards center. The structural firming up of these corners was absolutely necessary. The same generally applies to bearings and supports that bend excessively. Even an eminent master sumoetimes dimensioned things "wrongly," as necessary improvements. I consider primarily items of a structural/technical nature, which may include even the installation of an electrical blower, perhaps as an alternate solution.

No "improvements" of aesthetic matters, like for instance the correcting of supposedly faulty stoplists, must be undertaken. Around the turn of the century we restored organs by removal of the Mixture and installation of the Salicional. Today, restoration means something quite different.

9.5. The third category of compromise results from the dreaded "practical" request; in other words, the requests of the resident organist or choir director. He may be all for a restoration and does not insist on a new organ, but wants to have certain additions or changes done at all costs. The most frequently requested compromises of this type may be [several examples are given, adding stops,

combination actions, pitch changes, etc.]

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 5.2, 6.2, 6.3 ·3, ·4

5.2 A significant organ should not be altered through enlargement or rebuilding as its significance may be compromised. Enlargement means the fitting or addition of parts which were not present in the original, but without any changes to existing parts. Rebuilding means the free alteration of the existing form of the organ with no intention of serving any of the purposes of conservation. (Note that the removal of a non-original register and its replacement by another register which was present in the original is not part of a rebuild but is reconstruction. The replacement of single pipes which have become unusable is repair.)

6.2 The following should not occur: [there follows six bulleted items mentioning specific items such as "Replacing old stop knobs"

6.3 Other principles should be noted, as follows: Bullet 3: The replacement of original single, double or triple-rise bellows with an electric fan supplying a constant pressure or with spring regulators. Bellows (and other components such as wind trunks) which affect the wind characteristics of a particular organ should be restored rather than replaced. Pre-electric blowing apparatus should also be retained, together with other associated objects such as telltales, etc. Even if it is not possible to restore or repair these objects, they should still be retained as part of the historic interest of the organ.

4.RESTORATION AND RECONSTRUCTION
Together with preservation (see Conservation), these are the main processes associated with work which is needed to return an organ to a former higher standard.
Restoration is the returning of an altered instrument to an earlier documented condition by removing additions or by reassembling existing components without the introduction of new material (excepting, in the case of an organ, the components which perish with the working of the instrument such as felt, leather, wire and ivory or their acceptable substitutes).
Reconstruction is the returning of an altered instrument to as near as possible to an earlier documented condition and is distinguished from restoration by the introduction of lost or missing materials (new or old) into the organ. New material should be clearly distinguishable from the original, by labeling or documentation if necessary. [See also 5.1 Conjectural construction.]

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 4, esp. 4.6

4.6. If the situation is favorable, an independent pedal division or extra manual may be added under the condition that the enlargement has to be made exactly in the style and construction of the instrument. In enlargement may not affect any part of the existing organ, gourmet at affect its architecture. If, in the future, another generation wants to take away the enlargement it must be possible to bring the organ entirely back to its original situation.

It is no longer permitted to make transmissions were to borrow stops.

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) VI

VI. Additions and alterations
1. Basically no organ worthy of preservation should be extended or altered.
2. Only in very unusual circumstances can an exception to this be made.

Treatment: Enable future treatment 12

Comment Conservation is heavily focused on *future* interests. This principle lacks any mention in the organ documents, but is important to conservators. It is urges the use of materials and methods that are reversible or removable so re-treatment will be possible in the future (ex. one should consider an adhesive's solubility for future work in choosing materials as in not gluing up a windchest with epoxy, thinking you've fixed it once and for all).

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 16

16. Techniques and Materials
The conservation professional shall endeavour to u se only techniques and materials which, to the best o f current knowledge, meet the objectives of the treatment and have the least adverse effect on the cultural property. Ideally, the conservation professional shall use materials that can be most easily and most completely removed with minimal risk to any original part. Similarly, these techniques and materials should not impede future treatment or examination.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 21, 22

21. Suitability: The conservation professional performs within a continuum of care and will rarely be the last entrusted with the conservation of a cultural property. The conservation professional should only recommend or undertake treatment that is judged suitable to the preservation of the aesthetic, conceptual, and physical characteristics of the cultural property. When nonintervention best serves to promote the preservation of the cultural property, it may be appropriate to recommend that no treatment be performed.

22. Materials and Methods: The conservation professional is responsible for choosing materials and methods appropriate to the objectives of each specific treatment and consistent with currently accepted practice. The advantages of the materials and methods chosen must be balanced against their potential adverse effects on future examination, scientific investigation, treatment, and function.

Treatment: Limit or minimize extent of treatment 13

Comment If historic organs contain valuable historic evidence, then the historical integrity of that evidence is only assured to the extent that little has been done to the organ. A cornerstone of conservation is that intervention should be minimal in order to protect the survival and trustworthiness of the evidence. That doesn't necessarily mean treatment should stop short of what we judge is the minimum degree of restoration, but it does encourage careful thought about how much intervention is indeed essential.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 4

[this section prohibits many specific types of 'restorative' alterations, including cutting down pipes, changing cutups, changing nicking, changing toeholes, changing pitch, changing tuning devices, adding slider seals, etc.]

ICOM 1984 International Council Of Museums: Code of Ethics 3.3

3.3 Because the risk of harmful manipulation or transformation of the object is inherent in any measure of conservation or restoration, the conservator-restorer must work in the closest cooperation with the curator or other relevant scholar. Together they must distinguish between the necessary and the superfluous, the possible and the impossible, the intervention that enhances the qualities of the object and that which is detrimental to its integrity.

BIOS 1991 British Institute of Organ Studies 5

5. The following paragraphs deal specifically with some of the technical problems to be found in restoration. While no document of this kind can hope to provide the right solutions to every problem, the examples given generally illustrate the kinds of methods that will lead to a successful restoration.
[There follows sections on pipe work, console and fittings, mechanical key action, pneumatic key action (including pneumatic lever actions), electoral-pneumatic and electric actions, stop and combination actions, slider soundboards, sliderless chests, winding systems, casework, etc.]

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 2, 13, 17, 18

2. Respect for the Integrity of the Cultural Property
When conserving a cultural property, the conservation professional shall respect the integrity of the cultural property by endeavouring to preserve its material composition and culturally significant qualities through minimal intervention.

13. Necessity and Extent of Treatment
The conservation professional shall only recommend or undertake treatment that is necessary to, and appropriate for, the conservation of the cultural property. Conversely, a conservation professional shall not intentionally omit to recommend an essential treatment. When nonintervention best serves to promote the preservation* of the cultural property, it is appropriate that no treatment be performed.

17. Removal or Alteration of Material
No aspect of a cultural property should be altered nor should material be removed from it without justification. When such removal or alteration is required, those aspects or materials shall first be documented in their existing state. Where relevant, and with the agreement of the owner, material removed from an object shall be retained as part of the documentation of a cultural property.

18. Restoration and Reconstruction [see CAC definitions]]
Restoration and reconstruction are means of re-establishing culturally significant qualities of a cultural property. If undertaken they shall be fully documented and shall be carried out without fraudulent intent and to the minimum extent necessary.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide (4.5), (6.2) 6.3 ·1

4.5 In a restoration of museum quality, repairs that remove patina, and other evidence of aging, should be avoided. In organs that remain in constant use it may, for example, be desirable to protect timber surfaces by repolishing, where the original polish has disintegrated. Great care must be taken to avoid finishes not envisaged by the original builder

6.2 The following should not occur: [there follows six bulleted items mentioning specific items such as "Replacing old stop knobs"

6.3 Other principles should be noted, as follows:
Bullet 1: The treatment of pipework needs very special attention in the context of preservation. Alteration of those parts of a pipe that affect speech should be avoided, except where damage has occurred. Regulation should be minimised.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 21 (22)

21. Suitability: The conservation professional performs within a continuum of care and will rarely be the last entrusted with the conservation of a cultural property. The conservation professional should only recommend or undertake treatment that is judged suitable to the preservation of the aesthetic, conceptual, and physical characteristics of the cultural property. When nonintervention best serves to promote the preservation of the cultural property, it may be appropriate to recommend that no treatment be performed.

(22). Materials and Methods: The conservation professional is responsible for choosing materials and methods appropriate to the objectives of each specific treatment and consistent with currently accepted practice. The advantages of the materials and methods chosen must be balanced against their potential adverse effects on future examination, scientific investigation, treatment, and function.

OHS 1986 Organ Historical Society Guidelines 3(A), E, F

3(A). In general, all extant original components should be preserved and properly repaired. Severely damaged components may be replaced by new if incapable of being put into reliable working order and missing parts replaced by reproductions. All replacement parts should conform as closely as possible to the originals with regard to materials and method of construction.

3E. Pitman, ventil, and other forms of tubular-pneumatic or electropneumatic windchests should be restored using original techniques of design and construction and compatible materials and replacement parts. Replacement of such actions with all-electric units, even though the chest structure is retained, must be regarded as a major alteration. Similarly, replacement of original stop, combination, or player actions with ones of a different type constitutes an alteration, even though this may in some instances be necessary for financial reasons.

3F. Original bellows, reservoirs, wind trunks, concussion bellows, and other components which determine the wind characteristics of an organ should always be retained and releathered; if missing they should be replaced by new components conforming to the originals. Chest-mounted

"schwimmers" should not be added to organs not originally having them, nor springs added to a bellows which was originally weighted. Tremulants should be restored and adjusted; if replacement is necessary, it should conform to the style of the original. Feeder mechanisms, where extant, should be restored and made operable when feasible. The retention or addition of a modern electric blower does not detract from the historical value of an organ if installed with as little alteration to the original winding components as possible, but it is recognized that there is a discernible difference between fan-blown and hand-raised winding systems in organs which have both.

Treatment: Matching original material and workmanship; Making restorations detectable 14

Comment Restoration is often an attempt to reconstruct lost form so the instrument appears as if it had never aged or been changed in the first place. That means "matching original material and workmanship." Imitative restoration intends to deceive, blurs the line between original (or historic) work and the restorer's work, and is tantamount to what forensic investigators would call "tampering with evidence." This was the most glaring omission from the 1986 OHS guidelines, which strongly urged "All replacement parts should conform as closely as possible to the originals with regard to materials and method of construction."

But restoration if it is really restoration, should aspire to historical accuracy, so what is the solution? A few of the organ documents, and most of the conservation documents urge practitioners to make interventions detectable on close examination perhaps with a stamped date, or by leaving modern tool marks, etc.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 8.6

National differences are particularly strong when additions are being made, as we note, for instance, when a new "Rückpositive" is being added to an existing main case (or vice versa). While the rules of Swiss curators require the most accurate stylistic match, the German curators seem to avoid any such match ("one should see that this was built today"). There are similar points of view also regarding the relationship between organ and architectural environment (new-old organs in old buildings).

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 18, 20

18. Restoration* and Reconstruction*
Restoration and reconstruction are means of re-establishing culturally significant qualities of a cultural property. If undertaken they shall be fully documented and shall be carried out without fraudulent intent and to the minimum extent necessary. The presence and extent of any restoration or reconstruction must be detectable, though they need not be conspicuous.

20. Reproduction or Detailed Recording
When a cultural property is inherently unstable or when its social use is incompatible with its preservation, the conservation professional shall recommend a reproduction or a detailed recording as appropriate to the situation. The conservation professional shall outline suitable options that meet the need for content retention and that will result, during the reproduction or recording, in the least alteration to the original. A reproduction shall be clearly and easily identified as such.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.4.5, 4.2

3.4.5. It should be done in the same way as the original construction was, using the same materials, but distinguishable from these. There should be documentary evidence.

4.2. Additions and reconstructed parts should be distinguishable from the original structure (i.e. by stamping the date onto replaced parts, or noting this in the documentation, etc.)

RE 1981 Wegscheider & Werner "Richtlinien..." 4.2

Refrain from modernizing any of the original structure. Modern techniques or demands should not be applied in the case of historic instruments. The organ-builder must modify his own methods according to the original construction, and the organist must adapt his technical and musical

requirements to the instrument. This concerns the organ's technical aspects as well (Trakturen, Windladen). In most cases if the original working methods are followed exactly, organ parts can be reused (e.g. by taking care of the shafts (Stoecke) of old sliding panels (Scleifladen), instead of replacing them with cloth or leather seals (Lederscheiben).

Additions and reconstruction should be made out of similar materials and constructed in the same way as the organ-builder originally intended. If there are no other examples (such as another organ built by the same person) then some simple appropriate form should be chosen.

OHS 1986 Organ Historical Society Guidelines 3A,B,C, D,F,G

3A. In general, all extant original components should be preserved and properly repaired. Severely damaged components may be replaced by new if incapable of being put into reliable working order and missing parts replaced by reproductions. All replacement parts should conform as closely as possible to the originals with regard to materials and method of construction.

3A. In general, all extant original components should be preserved and properly repaired. Severely damaged components may be replaced by new if incapable of being put into reliable working order and missing parts replaced by reproductions. All replacement parts should conform as closely as possible to the originals with regard to materials and method of construction.

3B. Pipework should be carefully repaired by a professional pipemaker, replacements for missing pipes being made of the same material and construction details as the originals. The original means of tuning should be preserved wherever possible. An effort should be made to ascertain the original temperament and restore it. Voicing should be limited to the re-regulation of repaired pipes and the voicing of any replacement pipes in the style of the remaining originals.

3C. Keyboards, stop controls, and other console components should be kept in, or restored to, their original condition. A possible exception may occur in cases where the extension of a short pedal-board compass is necessary to the continued acceptance and use of an organ. Key and stop action should always be restored in such a way that any new materials conform to the original materials.

3D. Slider and pallet windchests should be very carefully restored and checked for soundness. When replacement of pallet covering is necessary, it should be with material corresponding to the original.

3F. Original bellows, reservoirs, wind trunks, concussion bellows, and other components which determine the wind characteristics of an organ should always be retained and releathered; if missing they should be replaced by new components conforming to the originals. Chest-mounted "schwimmers" should not be added to organs not originally having them, nor springs added to a bellows which was originally weighted. Tremulants should be restored and adjusted; if replacement is necessary, it should conform to the style of the original. Feeder mechanisms, where extant, should be restored and made operable when feasible. The retention or addition of a modern electric blower does not detract from the historical value of an organ if installed with as little alteration to the original winding components as possible, but it is recognized that there is a discernible difference between fan-blown and hand-raised winding systems in organs which have both.

3G. If the original finish of an organ case has been altered, an effort should be made to determine the nature of the original finish and to restore it whenever feasible. The same is true of front pipes, particularly those which were originally decorated in polychromed designs but have since been painted over. In repairing dame to case woodwork, particularly in unpainted cases, care should be

taken to match new wood to old.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 4.5d

Organs that have been changed drastically several times as a result that they have lost their original identity completely, having no more any specific character. Such organs have become characterless. In such situations and reconstruction may prove necessary; either an exact copy of the original plan were simply a reconstruction in the style of the period, but limited to the dimensions of the old front and organ case.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 3.4.2, 4

3.4.2 If the damage is so far advanced that the treatment with preservative preparations cannot guarantee the instrument's further preservation or playability, the affected parts must be exchanged for new parts. Any such parts which affect the sound of the instrument must be remade as exact (but distinguishable) copies of the original parts. This is reconstruction (see below for further advice).

4. RESTORATION AND RECONSTRUCTION
Together with preservation (see Conservation), these are the main processes associated with work which is needed to return an organ to a former higher standard.
Restoration is the returning of an altered instrument to an earlier documented condition by removing additions or by reassembling existing components without the introduction of new material (excepting, in the case of an organ, the components which perish with the working of the instrument such as felt, leather, wire and ivory or their acceptable substitutes).
Reconstruction is the returning of an altered instrument to as near as possible to an earlier documented condition and is distinguished from restoration by the introduction of lost or missing materials (new or old) into the organ. New material should be clearly distinguishable from the original, by labeling or documentation if necessary. [See also 5.1 Conjectural construction.]

6.2 The following should not occur:
Replacing old stopknobs with new ones of a different style. It is possible to make exact copies of old stopknobs which may have become unusable due to wear and deterioration, and this is the course which should be followed

BIOS 1991 British Institute of Organ Studies 4.2, 5

4.2. All repairs and replacement parts should be made in a manner consistent with the original work, both in materials used and method of construction. Any repairs or changes necessary during the course of restoration should be reversible, in case it be found at a later date that the work needs to be done again, either through further wear or deterioration, or because the original restoration was defective or that techniques have advanced since restoration took place.

5. The following paragraphs deal specifically with some of the technical problems to be found in restoration. [There follows sections on pipe work, console and fittings, mechanical key action, pneumatic key action (including pneumatic lever actions), electoral-pneumatic and electric actions, stop and combination actions, slider soundboards, sliderless chests, winding systems, casework, etc.]

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 23

23. Compensation for Loss: Any intervention to compensate for loss should be documented in treatment records and reports and should be detectable by common examination methods. Such compensation should be reversible and should not falsely modify the known aesthetic, conceptual, and physical characteristics of the cultural property, especially by removing or obscuring original material.

Treatment: Materials and methods: efficacy balanced with adverse long-term effects 15

Comment Traditional materials and methods are often a good choice, but are there ever times when modern materials (such as adhesives, coatings, or consolidants) or construction methods (innovative shimming or filling methods), might give the same appearance and performance, but better reversibility or better longevity?

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 16

16. Techniques and Materials
The conservation professional shall endeavour to use only techniques and materials which, to the best of current knowledge, meet the objectives of the treatment and have the least adverse effect on the cultural property. Ideally, the conservation professional shall use materials that can be most easily and most completely removed with minimal risk to any original part. Similarly, these techniques and materials should not impede future treatment or examination.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice VI, 22

VI. The conservation professional must strive to select methods and materials that, to the best of current knowledge, do not adversely affect cultural property or its future examination, scientific investigation, treatment, or function.

22. Materials and Methods: The conservation professional is responsible for choosing materials and methods appropriate to the objectives of each specific treatment and consistent with currently accepted practice. The advantages of the materials and methods chosen must be balanced against their potential adverse effects on future examination, scientific investigation, treatment, and function.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide (6.2 ·5)

6.2 The following should not occur:
The installation of slider seals, telescopic joints, etc. in soundboards or wind chests. It has been found that these alterations affect the tone of the instrument. Also the introduction of such devices is out of character with the style and practice of the original builder, and in some instances they have been shown to have had a short life.

Treatment: Prescribe procedures for maintenance, repair, or restoration 16

Comment Some of the organ documents attempted to give instructions about specific interventions that should or should not be done. This concordance does not include the specifics, but points the way to some of them.

Although rules of thumb can be envisioned, they are not really appropriate in a statement of principles such as the OHS Guidelines. The problem is that there is a vast continuum of preservation worthiness, and any such rules tend to fix all organs at one place on the continuum.

BIOS 1991 British Institute of Organ Studies 5

5. The following paragraphs deal specifically with some of the technical problems to be found in restoration. While no document of this kind can hope to provide the right solutions to every problem, the examples given generally illustrate the kinds of methods that will lead to a successful restoration. [There follows sections on pipe work, console and fittings, mechanical key action, pneumatic key action (including pneumatic lever actions), electoral-pneumatic and electric actions, stop and combination actions, slider soundboards, sliderless chests, winding systems, casework, etc.]

RE 1981 Wegscheider & Werner "Richtlinien..." 4.3

[This section gives very specific recommendations in the restoration of slider chest organs.]

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 2(M), 3(R), 6.3,

2. MAINTENANCE
Maintenance is the continuous protective care of an organ. This signifies the regulation, tuning and repair (see below) of minor defects in an organ.

3. REPAIR: This term refers to the repair of damage which influences the appearance or function of the instrument and is undertaken in the course of maintenance. As defined here, this terminology is only valid if the old parts of the organ are not changed and should not involve restoration or reconstruction (see below).

6.3 Other principles should be noted, as follows:
[Then follows five bullets, the first one, for example]: The treatment of pipework needs very special attention in the context of preservation. Alteration of those parts of a pipe that affect speech should be avoided, except where damage has occurred. Regulation should be minimised.

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) (III), (IV)

III. Care
Organ instruments worthy of preservation require exceptionally special care and maintenance. The upkeep of instruments worth preserving should only be entrusted to organ builders. Only they can reliably undertake the identifiable care and preservation of an instrument as it is meant to be done.
The organist should also be the caretaker of the organ.

IV. Repairs
The purpose of repairs is to conserve endangered or deteriorating existing original material in the

same way as the instrument originally was.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 4

[This section prohibits many specific types of 'restorative' alterations, including cutting down pipes, changing cutups, changing nicking, changing toeholes, changing pitch, changing tuning devices, adding slider seals, etc.]

Treatment: Removal of alterations, damaged materials, or other historic components 17

Comment Several of these documents from both conservation and organ groups have potentially useful language about removing alterations.

Some "alterations" may have developed historical significance (after all, subsequent history is history too.) Speaking of fine arts conservation, Cesare Brandi summarizes a situation that is also true of organ restoration:

“An addition to a work of art is nothing more than new testimony to human activity.... In this context, an addition is not different from the original stock and has the same right to conservation. . . . Therefore, from a historical point of view, only the conservation of an addition is unconditionally legitimate, while its removal always needs justification, or should at least be done in a manner that will leave a trace both of itself and on the work of art. Consequently, the conservation of an addition is the norm, removal the exception."

The implication is not that alterations should always be retained, but that one should anticipate their potential value to historians who may someday become interested in the history they reveal. When alterations are removed, regardless of any disdain for them, it is appropriate to document them.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.4.4, 4.2

As a rule the aim is to return to the last complete and provable condition again. If remaining material is insufficient to do this or to reliably return to the original state, work should be limited to maintaining a playable instrument, or keeping the condition it was found in.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 4.4.1, 6.2

6.2 The following should not occur:
* Replacing old stop labels with new ones which have a different style of lettering. Old stop labels which have lettering which has become illegible should be restored to their original appearance or replaced by new ones which are in the same style as the originals.
* Replacing old stopknobs with new ones of a different style. It is possible to make exact copies of old stopknobs which may have become unusable due to wear and deterioration, and this is the course which should be followed.
* The replacement of original single, double or triple-rise bellows with an electric fan supplying a constant pressure or with spring regulators. Bellows (and other components such as wind trunks) which affect the wind characteristics of a particular organ should be restored rather than replaced. Pre-electric blowing apparatus should also be retained, together with other associated objects such as telltales, etc. Even if it is not possible to restore or repair these objects, they should still be retained as part of the historic interest of the organ.
* Replacing mechanical key and stop action. Even the use of modern mechanical action (using modern materials) is questionable when applied to instruments of historic value.
* The installation of slider seals, telescopic joints, etc. in soundboards or wind chests. It has been found that these alterations affect the tone of the instrument. Also the introduction of such devices is out of character with the style and practice of the original builder, and in some instances they have been shown to have had a short life.
* The replacement of a hitch down or lever swell shutter control with a balanced swell pedal, and the replacement of an old pedal board with one conforming to modern standards should not occur. While

these adaptations may make the instrument easier to play for some present day performers, they constitute a departure from the original instrument and the style in which that instrument was played.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 4

[this section prohibits many specific types of 'restorative' alterations, including cutting down pipes, changing cutups, changing nicking, changing toeholes, changing pitch, changing tuning devices, adding slider seals, etc.]

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 17

17. Sampling and Testing: Prior consent must be obtained from the owner, custodian, or agent before any material is removed from a cultural property. Only the minimum required should be removed, and a record of removal must be made. When appropriate, the material removed should be retained.

OHS 1986 Organ Historical Society Guidelines 3A, E, F

3(A). In general, all extant original components should be preserved and properly repaired. Severely damaged components may be replaced by new if incapable of being put into reliable working order and missing parts replaced by reproductions. All replacement parts should conform as closely as possible to the originals with regard to materials and method of construction.

3E. Pitman, ventil, and other forms of tubular-pneumatic or electropneumatic windchests should be restored using original techniques of design and construction and compatible materials and replacement parts. Replacement of such actions with all-electric units, even though the chest structure is retained, must be regarded as a major alteration. Similarly, replacement of original stop, combination, or player actions with ones of a different type constitutes an alteration, even though this may in some instances be necessary for financial reasons.

3F. Original bellows, reservoirs, wind trunks, concussion bellows, and other components which determine the wind characteristics of an organ should always be retained and releathered; if missing they should be replaced by new components conforming to the originals. Chest-mounted "schwimmers" should not be added to organs not originally having them, nor springs added to a bellows which was originally weighted. Tremulants should be restored and adjusted; if replacement is necessary, it should conform to the style of the original. Feeder mechanisms, where extant, should be restored and made operable when feasible. The retention or addition of a modern electric blower does not detract from the historical value of an organ if installed with as little alteration to the original winding components as possible, but it is recognized that there is a discernible difference between fan-blown and hand-raised winding systems in organs which have both.

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) V.2

V. 2. During restoration, any repairs and additions that are uncharacteristic or in the wrong style should be removed.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 2.4; 7.3, 8.4; 8.5; 9.4, 9.8·1

2.4:
Only now, with full knowldege of the true "biography" of the instrument, can one discuss which historical phase of the instrument shall be the base for the restoration. The famous "original condition" is by no means always the most sensible and desirable for the restoration efforts. I would like to illustrate this with an example from the Fine Arts. A Gothic Madonna surrounded by Baroque decoration is to be restored. When x-rays reveal that under that some Gothic decoration has been preserved, one might consider removing the Baroque decoration to uncover the Gothic one. When,

however, closer examination shows that only minor traces of the Gothic version were actually preserved, one hardly would destroy the Baroque decor and replace it with largely hypothetically new, supposedly "Gothic" decor. Nowadays one distances oneself everywhere from this kind of "creative historic preservation" and one respects the altered version as "evolved condition." My esteemed reader will certainly be able to transfer this simple example from Art History into the somewhat complicated organ world. The task is to determine, without prejudice, which material from which period is actually at hand, and how a sensible whole can be made from this. This way the project outline is developed. In practice, unfortunately, this project outline is already immediately declared the final plan for the bidding process as well as the project itself. This is unwise and dangerous. Nobody, neither consultant nor organbuilder, should act with such self-assurance. This matter has to be treated with great care; hasty decisions must be avoided.

7.3:
No "improvements" of aesthetic matters, like for instance the correcting of supposedly faulty stoplists, must be undertaken. Around the turn of the century we restored organs by removal of the Mixture and installation of the Salicional. Today, restoration means something quite different.

8.4:
How shall we deal with the object that has been declared worthy of preservation? A few key words should suffice. For a while, the monument preservation by "purification" was in vogue. Purity and unity of style were considered desirable. All later additions and changes of such an object had to disappear during the restoration. After this "clean-sweep," the creative curator completed the remaining torso to result in stylistic unity. Such activity necessarily opened the door to much guesswork and also subjective taste.

8.5:
Today, in contrast, it is fashionable to leave alone the "evolved condition." As we all know, unwise application of any in-itself-correct principle can lead to nonsense. Therefore, one should also not put everything that can be consolidated under the motto "accidents and crimes" under monument protection in blind obedience of this new fashion term even if the accident dates back more than fifty years. By "evolved condition," I understand a conscientious artistic modification and new interpretation that was executed in workmanlike quality. In such case, without doubt, this "evolved condition" can be basis for restoration.

9.4:
The second category of compromise results from the frequent acceptance of the "evolved condition." Seen by the light of day, restoration of an "evolved condition" is a paradox in itself, because the "evolved condition" is the present actual condition and restoration supposedly means a reconstruction. If you look at it this way, restoration of an "evolved condition" means a compromise between "purifying" historical preservation and doing nothing at all. This compromise may apply to varying degrees to different parts of the same instrument. A theoretical example: restore the action to the 1740 condition, retain the stop list of 1812, find a modern solution to the wind system while the old bellows chamber shall be restored as a chapel. Questions of individual assessment play a role, too; there is not only one correct solution. Often it is wrong to see the organ only through the eyes of an organ nut; the architectural and functional conditions have to be included in the overall view.

9.8 bullet 1
Changes that lead to a permanent loss of the organ's substance are very problematic and certainly should be avoided.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 17

17. Removal or Alteration of Material

No aspect of a cultural property should be altered nor should material be removed from it without justification. When such removal or alteration is required, those aspects or materials shall first be documented in their existing state. Where relevant, and with the agreement of the owner, material removed from an object shall be retained as part of the documentation of a cultural property.

BIOS 1991 British Institute of Organ Studies 4.2

All original components should be preserved and properly repaired. Components that have been severely damaged or altered beyond repair, and are incapable of being put into reliable working order, may be replaced by reproductions. All repairs and replacement parts should be made in a manner consistent with the original work, both in materials used and method of construction. Any repairs or changes necessary during the course of restoration should be reversible, in case it be found at a later date that the work needs to be done again, either through further wear or deterioration, or because the original restoration was defective or that techniques have advanced since restoration took place.

Treatment: Responsibility to originator 18

Comment Is the presumed intensions of the original designer/builder the only or primary basis of restoration? How should we be respectful of the original builder's intensions, and when is it more responsible to respect the work of later restorers who deviated from the orignal form?

Bear in mind that a historic organ may have become more than the original maker envisioned. It has become a historic document with evidence of a long history about which the original maker knew nothing.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice II

II. All actions of the conservation professional must be governed by an informed respect for the cultural property, its unique character and significance, and the people or person who created it.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.4.5, 4.2

3.4.5 Reconstruction means the rebuilding of lost original parts, and is essentially part of restoration. It should be done in the same way as the original construction was, using the same materials, but distinguishable from these. There should be documentary evidence. It is also possible to reconstruct individual elements of the organ, and leave others in a later condition.

4.2 Additions and reconstruction should be made out of similar materials and constructed in the same way as the organ-builder originally intended. If there are no other examples (such as another organ built by the same person) then some simple appropriate form should be chosen.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 2

2. Respect for the Integrity of the Cultural Property
When conserving a cultural property, the conservation professional shall respect the integrity of the cultural property by endeavouring to preserve its material composition and culturally significant qualities through minimal intervention. The original intention, usage, history and evidence of provenance of the property must be respected. This respect for the integrity of the cultural property shall be based upon the study of the cultural property and on consultations with the owner and, when applicable, the originator. When relevant, other authorities or documentary sources should be consulted.

BIOS 1991 British Institute of Organ Studies (2.4)

2.4. Organs, like other musical instruments, are works of art. The most significant examples rank alongside famous violins and paintings by great masters, though as they are fixtures and not often marketable, their monetary value may not reflect this. Even the most humble examples represent great care and skill on the part of their makers, and the temptation to alter them to conform to tastes in playing that the maker did not invisage, should be avoided. Nor should it be imagined that the non-sounding parts of the organ are just mechanism, and can be changed at will; each part has a vital role in affecting the way the instrument can be played, and therefore the way it will sound.

Treatment: Reversibility or removability 19

Comment Conservation proceeds from an assumption of the practitioner's own fallibility. The principle of reversibility addresses this, and is a central tenet of conservation. Using reversible treatments would theoretically mean mistakes can simply be undone in the future. Moreover, if a conservation treatment can be "reversed" without leaving a trace, it implies there has been no loss of historical evidence.

A close look at the concept of reversibility, however, reveals it to be a myth, but a very useful myth. It is an ultimately impossible but worthy aspiration for remedial conservation. Claims of true reversibility often reveal a failure to recognize the long-term impact of all intervention. Simply put, the reversibility principle urges treatment plans that minimize the loss of historical evidence.

Consider urging restorers to "aspire to make treatments reversibility, even though true reversibility is a practical impossibility.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 23

23. Compensation for Loss: Any intervention to compensate for loss should be documented in treatment records and reports and should be detectable by common examination methods. Such compensation should be reversible and should not falsely modify the known aesthetic, conceptual, and physical characteristics of the cultural property, especially by removing or obscuring original material.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.4, 4.2

3.4. All measures taken to preserve historically valuable organs must be reversible, so that it can be returned to its previous condition without undue intervention.

4.2. Any work carried out on the original structure should respect reversibility. In other words, it should be possible to return it to its former condition before work began (with the exception of those replaceable parts such as leather pulls (Lederpulpeten)) Reversibility is possible if hot glue is used, if parts that have been replaced are kept, and with the help of photography or a description of its former state.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 9.8·2

[On giving in to practical requests] Changes that remain reversible without great loss of substance may be considered.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) -4.6

If the situation is favorable, an independent pedal division or extra manual may be added under the condition that the enlargement has to be made exactly in the style and construction of the instrument. In enlargement may not affect any part of the existing organ, gourmet at affect its architecture. If, in the future, another generation wants to take away the enlargement it must be possible to bring the organ entirely back to its original situation.

It is no longer permitted to make transmissions were to borrow stops.

BIOS 1991 British Institute of Organ Studies 4.2

All original components should be preserved and properly repaired. Components that have been severely damaged or altered beyond repair, and are incapable of being put into reliable working

order, may be replaced by reproductions. All repairs and replacement parts should be made in a manner consistent with the original work, both in materials used and method of construction. Any repairs or changes necessary during the course of restoration should be reversible, in case it be found at a later date that the work needs to be done again, either through further wear or deterioration, or because the original restoration was defective or that techniques have advanced since restoration took place.

Treatment: Single standard 20

Comment The principle of "single standard" is found in a number of conservation documents, though it is not usually called by this phrase in the newer documents. The principle is best understood from a medical analogy. You would not want your medical doctor to aim the quality of his care on his estimate of your worth as a human being. The medical profession, we must hope, operates on a "single standard" principle, meaning all patients are worthy of the best medical care.

Note the language of the AIC and CAC, both of which give a current interpretation of the single standard principle.

BIOS 1991 British Institute of Organ Studies (2.4)

2.4. Organs, like other musical instruments, are works of art. The most significant examples rank alongside famous violins and paintings by great masters, though as they are fixtures and not often marketable, their monetary value may not reflect this. Even the most humble examples represent great care and skill on the part of their makers, and the temptation to alter them to conform to tastes in playing that the maker did not invisage, should be avoided. Nor should it be imagined that the non-sounding parts of the organ are just mechanism, and can be changed at will; each part has a vital role in affecting the way the instrument can be played, and therefore the way it will sound.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice V

V. While circumstances may limit the resources allocated to a particular situation, the quality of work that the conservation professional performs shall not be compromised.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 3

3. Standard of Conservation* Work
While circumstances may limit both the resources allocated to a particular situation and the extent of the work, the quality of work that the conservation professional performs shall not be compromised, regardless of any opinion held with respect to the value or quality of the cultural property.

Treatment: Stylistic unity versus evolved state 21

Comment Clearly, the organ documents have had the most to say on this question. The impression that "restorative conservaiton" is a contradiction of terms comes closest to reality here, since the restoration is more interested in a lost stylistic unity, while conservation is historically more concerned with preserving evidence, including what is encoded in an artifact about its entire history.

One implication of this tension is to encourage that where the recovery of stylistic unity prompts restorative interventions, conservation methodologies (documentation, reversibility, archiving removed materials, making interventions detectable, etc) should be fully employed to preserve the full story of the organ's evolution over time.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 4.5

The question coming up again and again: should the specification, if already altered, the restored to the original one or stay as it is? Organs to be restored belong to the following groups:
a) Organs within entirely original specification. These organs are quite rare and, of course, will be kept in their original condition.
b) Organs with a drastically altered specification. Such a specification might be entirely different from the original, but nevertheless good or even excellent in itself. Until recently subjective opinions have too often resulted in lack of faith in certain instruments which have been therefor regretfully lost through restoration.
c) Organs with the specification altered only incidentally, that is to say organs with a disfigured face. Such specifications will be restored to the original situation. This is also true for minor changes in the construction, such as petal boards, modern, tremulants, wind regulators and such.
d) Organs that have been changed drastically several times as a result that they have lost their original identity completely, having no more any specific character. Such organs have become characterless. In such situations and reconstruction may prove necessary; either an exact copy of the original plan) were simply a reconstruction in the style of the period, but limited to the dimensions of the old front in organhim case.

BIOS 1991 British Institute of Organ Studies 1.3, 2.1, 4.1, 5

1.3. BIOS believes that the musical success of a good organ is due to a happy combination of the builder's skill and the particular date of construction. Subsequent alterations to keep pace with changes in fashion, whether to pipes or mechanism, will weaken the builder's original artistic concept and make the organ a less good musical instrument than before. Where no alterations have been made, they should be avoided; where alterations have been made, they should be reversed if this is reasonable.

2.1. The significance of an old organ increases with its age, rarity, and the extent to which it remains in its original state. Broadly speaking, any unaltered organ by a well-respected builder should be maintained in or restored to its original state, or a state as near the original as possible, without any concession to modern taste being felt necessary. If restoration to the original state is impossible, the instrument may be restored to a chosen former state, usually decided as being that state which the organ last represented, in a coherent and recognizable way, the work of one builder or school of builders.

4.1. Restoration may be defined as the process of returning an organ to its original state, or to as near its original state as is possible, or to some other chosen earlier state. The word is often mis-

used to cover various forms of rebuilding or alteration. In some cases a little altered instrument may be restored to its original state by a simple programe of cleaning, repair and adjustment. Other instances may require the reproduction of missing or damaged parts. In severe cases the whole organ may be rebuilt in the style of the original builder round some surviving material, in which case the work is likely to be of a more speculative nature, and should perhaps be termed reconstruction.

5. The following paragraphs deal specifically with some of the technical problems to be found in restoration. While no document of this kind can hope to provide the right solutions to every problem, the examples given generally illustrate the kinds of methods that will lead to a successful restoration. [There follows sections on pipe work, console and fittings, mechanical key action, pneumatic key action (including pneumatic lever actions), electoral-pneumatic and electric actions, stop and combination actions, slider soundboards, sliderless chests, winding systems, casework, etc.]

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob (2.4), 8.4, 8.5, 9.4

2.4:
Only now, with full knowldege of the true "biography" of the instrument, can one discuss which historical phase of the instrument shall be the base for the restoration. The famous "original condition" is by no means always the most sensible and desirable for the restoration efforts. I would like to illustrate this with an example from the Fine Arts. A Gothic Madonna surrounded by Baroque decoration is to be restored. When x-rays reveal that under that some Gothic decoration has been preserved, one might consider removing the Baroque decoration to uncover the Gothic one. When, however, closer examination shows that only minor traces of the Gothic version were actually preserved, one hardly would destroy the Baroque decor and replace it with largely hypothetically new, supposedly "Gothic" decor. Nowadays one distances oneself everywhere from this kind of "creative historic preservation" and one respects the altered version as "evolved condition." My esteemed reader will certainly be able to transfer this simple example from Art History into the somewhat complicated organ world. The task is to determine, without prejudice, which material from which period is actually at hand, and how a sensible whole can be made from this. This way the project outline is developed. In practice, unfortunately, this project outline is already immediately declared the final plan for the bidding process as well as the project itself. This is unwise and dangerous. Nobody, neither consultant nor organbuilder, should act with such self-assurance. This matter has to be treated with great care; hasty decisions must be avoided.

8.4:
How shall we deal with the object that has been declared worthy of preservation? A few key words should suffice. For a while, the monument preservation by "purification" was in vogue. Purity and unity of style were considered desirable. All later additions and changes of such an object had to disappear during the restoration. After this "clean-sweep," the creative curator completed the remaining torso to result in stylistic unity. Such activity necessarily opened the door to much guesswork and also subjective taste.

8.5:
Today, in contrast, it is fashionable to leave alone the "evolved condition." As we all know, unwise application of any in-itself-correct principle can lead to nonsense. Therefore, one should also not put everything that can be consolidated under the motto "accidents and crimes" under monument protection in blind obedience of this new fashion term even if the accident dates back more than fifty years. By "evolved condition," I understand a conscientious artistic modification and new interpretation that was executed in workmanlike quality. In such case, without doubt, this "evolved condition" can be basis for restoration.

9.4:
The second category of compromise results from the frequent acceptance of the "evolved condition." Seen by the light of day, restoration of an "evolved condition" is a paradox in itself, because the "evolved condition" is the present actual condition and restoration supposedly means a reconstruction. If you look at it this way, restoration of an "evolved condition" means a compromise between "purifying" historical preservation and doing nothing at all. This compromise may apply to varying degrees to different parts of the same instrument. A theoretical example: restore the action to the 1740 condition, retain the stop list of 1812, find a modern solution to the wind system while the old bellows chamber shall be restored as a chapel. Questions of individual assessment play a role, too; there is not only one correct solution. Often it is wrong to see the organ only through the eyes of an organ nut; the architectural and functional conditions have to be included in the overall view.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 4.1, 4.4, 6.3 ·2

4.1 In contrast to preventative conservation or preservation, restoration and reconstruction strive not only to preserve the existing historic parts of the organ, but at the same time, to undo alterations which the instruments may have previously undergone. Note, however, that it is not necessary that a restoration or reconstruction must return an organ to its original form. That is, not all alterations need to be undone, but more importantly, it is preferable to return the organ to an artistically-worthy form and condition that is advantageous to the organ. It is usually inadvisable to take the organ back in time past a condition or form which itself has historic value. (For example, an organ built in the 1860s which was enlarged in the 1880s and was further altered, rebuilt or electrified in the 1950s might be restored only to its 1880s rather than 1860s form - the prior assessment of significance will guide the decisions on this.)

4.4 During restoration or reconstruction, influences and elements foreign to the style of the organ are to be removed.

6.3 Other principles should be noted, as follows:...
Original cone tuning should be preserved or restored wherever possible. The fitting of tuning slides to metal pipes should only take place, if at all, where the smallest pipes of a rank have been extremely badly damaged by cone tuning and pipes should not be trimmed down. Even then, tuning slides should only be added to these smallest pipes and their addition should be most carefully considered since this method of tuning is not in keeping with the organbuilding practices of the original builder. In cases where an accredited conservator considers metal pipework to be of such delicate or inferior construction that damage is likely to result from ongoing cone tuning, consideration may be given to the fitting of tuning slides on small pipes. The cutting of slots in any pipes should not be necessary. Naturally, all of these practices lead to tuning instability. The practice of cone tuning must be undertaken with the utmost care.

RE 1981 Wegscheider & Werner "Richtlinien..." 1 (p8), 3.4.4

Nowadays the tendency is more towards conservation (with restoration in exceptional cases), with maintenance and care as priorities. This is a logical consequence drawn from practice in the past. Formerly, valuable historic organs were either torn down or radically rebuilt. Then later on (and sometimes to this day) the rule was to restore “at any price”. Misplaced theories of the day were forcibly applied to organs in good condition, giving them a new tone. (This practice was also misguidedly applied to many baroque organs, e.g. Silbermanns)

3.4.4. Restoration means returning an old and altered substance to an earlier condition for which there is evidence. In many cases it will no longer be possible to revert to the original (primary)

condition. This should only be attempted if there is definite evidence of the primary state. When guesswork begins, restoration must stop. As a rule the aim is to return to the last complete and provable condition again. If remaining material is insufficient to do this or to reliably return to the original state, work should be limited to maintaining a playable instrument, or keeping the condition it was found in. If enough of the instrument remains (e.g. pipes), it may be possible to approximate the original condition to a certain extent by reconstructing missing parts based on existing ones. But if, in dong so, a complete condition later in date than the original would be destroyed, measures taken should be verified according to the above-mentioned viewpoints (see section 3.2).

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) V.1

V. Restoration (reconstruction)
1. In general restoration aims at returning an existing condition to its former state, for which from a conservation point of view the best prerequisites are present.
2. During restoration, any repairs and additions that are uncharacteristic or in the wrong style should be removed.

OHS 1986 Organ Historical Society Guidelines 3C

3C. Keyboards, stop controls, and other console components should be kept in, or restored to, their original condition. A possible exception may occur in cases where the extension of a short pedalboard compass is necessary to the continued acceptance and use of an organ. Key and stop action should always be restored in such a way that any new materials conform to the original materials.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 18

18. Restoration* and Reconstruction*
Restoration and reconstruction are means of re-establishing culturally significant qualities of a cultural property. If undertaken they shall be fully documented and shall be carried out without fraudulent intent and to the minim um extent necessary. The presence and extent of any restoration or reconstruction must be detectable, though they need not be conspicuous.

Preventive Conservation 22

Comment "Preventive conservation is [according to CAC]... to ensure appropriate conditions of storage, display, use and handling of a cultural property, or shall provide guidance for others to do so." This is a major aspect of conservation, and one that few organ documents have said much about. The idea of preventive efforts is to prevent damage from occuring in the first place, and it should not be thought of as "passive" for it takes a great effort on everyone's part, including educating organ users and owners.

The environment to which an artifact is subjected is responsible for most of its decay. Some environmental factors can form deadly combinations that feed on each other. For example, the synergistic pathogens of pollution, heat, and humidity work together to greatly accelerate several decay processes, including corrosion and leather decay.

While most preventive measures must be left to the owners of an historic instrument, the responsibility for making recommendations for an ongoing program of prevention falls on the conservator. Conservation reports should include preventive conservation recommendations.

ICOM 1984 International Council Of Museums: Code of Ethics 2.1

2.1 The activity of the conservator-restorer (to conservation) consists of technical examination, preservation, and conservation-restoration of cultural property: Preservation is action taken to retired or prevent deterioration of or damage to cultural properties by control of their environment and/or treatment of their structure in order to maintain them as nearly as possible in an unchanging state.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice VIII, 20

VIII. The conservation professional shall recognize a responsibility for preventive conservation by endeavoring to limit damage or deterioration to cultural property, providing guidelines for continuing use and care, recommending appropriate environmental conditions for storage and exhibition, and encouraging proper procedures for handling, packing, and transport.

20. Preventive Conservation: The conservation professional should recognize the critical importance of preventive conservation as the most effective means of promoting the long-term preservation of cultural property. The conservation professional should provide guidelines for continuing use and care, recommend appropriate environmental conditions for storage and exhibition, and encourage proper procedures for handling, packing, and transport.

BIOS 1991 British Institute of Organ Studies 3.3

Responsibility for maintenance does not lie only with the organ tuner. Like furniture and other musical instruments, organs suffer badly from extremes of temperature and humidity. sudden changes of climate, whether extreme heat, extreme dryness or extreme damp, can all cause serious damage to an organ. New heating systems are often to blame: most historic organs were built at a time when heating was efficient or nonexistent and are not made with such systems in mind. Temperature of 10°C (50°F) to 16°C (60°F) and a relative humidity of 55% are ideal. The organ and its surroundings should be kept free of dirt and rubbish and should be guarded against interference or vandalism. Moderate use of an organ will not usually do any damage and is better than complete disuse.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition IV, 7, 8, 21, 22, G9

IV. The conservation professional shall seek to prevent damage and deterioration to a cultural property under his/her care by implementing, or by recommending to the owner, appropriate preventive conservation measures.

7. Preventive Conservation*
Preventive conservation is a primary objective of the conservation professional and must be considered prior to direct intervention with the cultural property. The conservation professional shall strive to ensure appropriate conditions of storage, display, use and handling of a cultural property, or shall provide guidance for others to do so.

8. Safekeeping of Cultural Property
The conservation professional should ensure working, storage and transportation conditions designed to protect cultural property while in his or her care.

21. Subsequent Care
The conservation professional shall advise the owner on the requirements for subsequent care of the cultural property, which may include specifications for shipping and handling, storage, display and maintenance.

22. Emergency Situations
The conservation professional shall endeavour to be prepared for emergency situations or to undertake emergency response planning according to currently accepted practice. This includes consultation with the owner and, when applicable, with the originator in order to establish the extent of, or priority for, recovery. In an emergency, the conservation professional shall render all assistance practicable with due respect given, as far as possible, to the guideline s in this document. If a departure from norm al practice is necessary, the conservation professional shall take care to advise the owner or appropriate authority and should recommend subsequent actions. During or subsequent to the emergency situation, the conservation professional shall document the actions taken.

[Definition of] Preventive Conservation: All actions taken to mitigate deterioration and damage to cultural property. This is achieved
through the formulation and implementation of policies and procedures in areas such as lighting, environmental conditions, air quality, integrated pest management; handling, packing and transport, exhibition, storage, maintenance, use, security; fire protection, and emergency preparedness and response.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide (2.3)

(2.3) The organist should be a person who can be trusted with the organ.

2.3.1 It is recommended that appointed organists should be persons who:
have understanding and appreciation of the instrument entrusted to them;
are capable of observing, assessing and reporting the current condition of the instrument.

2.3.2 Only in extraordinary circumstances should the resident organist be allowed to tune, and then only the reeds, after appropriate instruction from the usual tuner, and if they are accessible without disturbance to other pipes.
Admission to the inside of the organ should be restricted only to organ specialists, or to persons under their supervision.

The interior of an organ should never be used for storage of furniture, flower vases and other church materials.
If major damage is discovered, the owners of the organ, the maintenance contractor, and either the Organ Historical Trust of Australia or the National Trust in each state should be advised. In NSW, the NSW Heritage Office should also be consulted, so that the required repairs can be initiated.

Documentation 23

Comment Recording interventions (as opposed to recording measurements and specifications) comes close to being a litmus test to distinguish restorative conservation from traditional restoration. The ethical importance of documentation accounts for the emphasis it receives in the AIC Standards for Practice and the associated Commentaries, which devote considerably more space to documentation than to treatment itself. Documentation is "ethical" because it has to do with obligations to our successors to record our work in a way that preserves the integrity of the historical record.

In short, documentation is a way to protect the instrument's fragile testimony from our well-meaning but inescapably interpretive alterations. Documentation bridges the break in continuity between the instrument's evolved state and the post-restoration state, and is essential for protecting historical integrity during the restoration of musical integrity. The thoroughness of the documentation determines the historical integrity of the instrument after we have left our stamp.

What is conservation documentation and how does it differ from the recording of organological measurements and observations? First, conservation documentation can include any kind of descriptive information. Even more importantly, however, treatment documentation records restorative alterations, and is one of the primary means of reducing the loss of evidence during treatment. In some ways, organological information is what we take from the organ for ourselves, and conservation documentation is what we give our successors to maintain the organ's historical authority.

The guidelines for conservation and restoration should place strong emphasis on treatment documentation, and leave it to other documents to urge and guide the systematic collection of organ design data.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.5.1, 3.5.2, 3.6

[Section 3.5 is on organological documentation as a systematic inventory of organ components.]
[Section 3.6 is on treatment documentation.]

OHS 1986 Organ Historical Society Guidelines (31)

(3I) It is highly desirable that a restorer keep detailed records, measurements, photographs, etc. during the course of the restoration work. Copies of such records sent to the Archives of the OHS are always greatly appreciated and may provide valuable information to future researchers and restorers.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 4, G4

4. Documentation*
The conservation professional shall document his/her work by recording all essential details of the conservation o f a cultural property. The extent and type of documentation will vary with the nature of the cultural property and conservation work required. Documentation is part of the history of the cultural property and shall be produced and maintained in as permanent a manner as is practical. Documentation shall be available for appropriate access when this access does not contravene confidentiality.

[Definition of] Documentation:
All of the records, written and pictorial, accumulated during the examination and treatment of a cultural property. Where applicable, documentation includes the examination records and report, treatment proposal, owner consent, the treatment records and report, the recommendations for subsequent care, samples taken from the cultural property and relevant correspondence. The purpose of documentation is:
* to record the condition of the cultural property;
* to record in formation revealed during examination or other conservation activities that assists in the understanding of the cultural property;
* to record the changes to the property due to conservation activities, and the justification for those changes;
* to provide information helpful to future care and treatment of the cultural property;
* to record agreements or understandings between the conservation professional and the owner; and
* to provide documents that can be made available if and when required for legal purposes.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 4.3

4.3 Before restoration or reconstruction, a thorough detailed documentation of the organ should be undertaken before the instrument is dismantled. On the basis of this documentation, a work program will be scheduled, which can be adapted to any new factors which may become apparent when the organ is dismantled. The course of the work must be thoroughly recorded in a written report. There may be a need for review of the conservation management plan if significant new information is revealed during dismantling.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice VII, 24

VII. The conservation professional shall document examination, scientific investigation, and treatment by creating permanent records and reports.

24. Documentation: The conservation professional has an obligation to produce and maintain accurate, complete, and permanent records of examination, sampling, scientific investigation, and treatment. When appropriate, the records should be both written and pictorial. The kind and extent of documentation may vary according to the circumstances, the nature of the object, or whether an individual object or a collection is to be documented. The purposes of such documentation are:
* to establish the condition of cultural property;
* to aid in the care of cultural property by providing information helpful to future treatment and by adding to the profession's body of knowledge;
* to aid the owner, custodian, or authorized agent and society as a whole in the appreciation and use of cultural property by increasing understanding of an object's aesthetic, conceptual, and physical characteristics; and to aid the conservation professional by providing a reference that can assist in the continued development of knowledge and by supplying records that can help avoid misunderstanding and unnecessary litigation.

Documentation: for archival storage 24

Comment Who is conservation documentation really for? It is for people in the future who will not have been around to observe and recall our restorative interventions. Thus if the documentation is to get to its audience, it must be preserved. This means submitting to archives such as the AOA, and perhaps summaries glued to the inside of the organ itself, all in addition to the report given to the owner and retained by the practitioner. The OHS guidelines of 1986 set a good example for its time with its comment that "records sent to the Archives of the OHS are always greatly appreciated" but perhaps this should be put a bit stronger (without making it a hard rule.)

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 4, 11

4. Documentation*
...Documentation is part of the history of the cultural property and shall be produced and maintained in as permanent a manner as is practical. Documentation shall be available for appropriate access when this access does not contravene confidentiality.

11. Sampling
...Only a minimum of sample material shall be removed, and a record of sample removal shall be kept. Where relevant, and with the agreement of the owner, material removed from a cultural property should be retained as par t of the documentation of that cultural property.

BIOS 1991 British Institute of Organ Studies -5.13

A copy of this record should be given to the church or customer. The restorer should allow for the cost of this work in his estimate. Copies of such records sent to BIOS's British Organ Archives are always appreciated, and may provide valuable information for future restorers and researchers.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice VII, 28

XII. The conservation professional shall practice in a manner that minimizes personal risks and hazards to co-workers, the public, and the environment. XIII. Each conservation professional has an obligation to promote understanding of and adherence to this Code of Ethics.

28. Preservation of Documentation: Documentation is an invaluable part of the history of cultural property and should be produced and maintained in as permanent a manner as practicable. Copies of reports of examination and treatment must be given to the owner, custodian, or authorized agent, who should be advised of the importance of maintaining these materials with the cultural property. Documentation is also an important part of the profession's body of knowledge. The conservation professional should strive to preserve these records and give other professionals appropriate access to them, when access does not contravene agreements regarding confidentiality.

OHS 1986 Organ Historical Society Guidelines (31)

(3I) It is highly desirable that a restorer keep detailed records, measurements, photographs, etc. during the course of the restoration work. Copies of such records sent to the Archives of the OHS are always greatly appreciated and may provide valuable information to future researchers and restorers.

Documentation: for future care (preventive conservation recommendations) 25

Comment This topic is about the importance of including preventive conservation recommendations in treatment documentation. Note that the organ documents have never included any mention of this responsibility, while the two conservation documents say much.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition IV, 7, G4.4

IV. The conservation professional shall seek to prevent damage and deterioration to a cultural property under his/her care by implementing, or by recommending to the owner, appropriate preventive conservation measures.

7. Preventive Conservation*
Preventive conservation is a primary objective of the conservation professional and must be considered prior to direct intervention with the cultural property. The conservation professional shall strive to ensure appropriate conditions of storage, display, use and handling of a cultural property, or shall provide guidance for others to do so.

Definition of] Documentation:
* to provide information helpful to future care and treatment of the cultural property;

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice VIII, 24, 27

VII. The conservation professional shall document examination, scientific investigation, and treatment by creating permanent records and reports.

24. Documentation: The conservation professional has an obligation to produce and maintain accurate, complete, and permanent records of examination, sampling, scientific investigation, and treatment. When appropriate, the records should be both written and pictorial. The kind and extent of documentation may vary according to the circumstances, the nature of the object, or whether an individual object or a collection is to be documented. The purposes of such documentation are:
* to establish the condition of cultural property;
* to aid in the care of cultural property by providing information helpful to future treatment and by adding to the profession's body of knowledge;
* to aid the owner, custodian, or authorized agent and society as a whole in the appreciation and use of cultural property by increasing understanding of an object's aesthetic, conceptual, and physical characteristics; and to aid the conservation professional by providing a reference that can assist in the continued development of knowledge and by supplying records that can help avoid misunderstanding and unnecessary litigation.

27. Documentation of Treatment: During treatment, the conservation professional should maintain dated documentation that includes a record or description of techniques or procedures involved, materials used and their composition, the nature and extent of all alterations, and any additional information revealed or otherwise ascertained. A report prepared from these records should summarize this information and provide, as necessary, recommendations for subsequent care.

Documentation: for owners 26

Comment On the importance of providing treatment documentation to owners.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 4, 15

4. Documentation*
The conservation professional shall document his/her work by recording all essential details of the conservation of a cultural property. The extent and type of documentation will vary with the nature of the cultural property and conservation work required. Documentation is part of the history of the cultural property and shall be produced and maintained in as permanent a manner as is practical. Documentation shall be available for appropriate access when this access does not contravene confidentiality.

15. Documentation of Treatment
Treatment records shall include the date of the treatment, a description of the interventions and of the materials used (with their composition, where known), observations, as well as any details of the structure, materials, condition or relevant history of the cultural property that have been revealed during treatment. From these records a summary shall be prepared in the form of a treatment report. The conservation professional shall provide the owner with this report and shall stress the importance of maintaining the rep ort as part of the history of the cultural property.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 4.1

4.1 Now that all additional conclusions from the dismantling of the organ have been recognized, the workplan can be definitely outlined. This, of course, has to be done by cooperation of all involved parties: organbuilder, consultant, monument curator, the organist, church and parish officials. Nobody should be left out, so that everybody possible should support the project. This, of course, by no means guarantees that all wishes of all involved can be accommodated completely. Sometime later we will come back to the inevitable "practical" requests.

BIOS 1991 British Institute of Organ Studies 5.13

A copy of this record should be given to the church or customer. The restorer should allow for the cost of this work in his estimate. Copies of such records sent to BIOS's British Organ Archives are always appreciated, and may provide valuable information for future restorers and researchers.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 26, 28

26. Treatment Plan: Following examination and before treatment, the conservation professional should prepare a plan describing the course of treatment. This plan should also include the justification for and the objectives of treatment, alternative approaches, if feasible, and the potential risks. When appropriate, this plan should be submitted as a proposal to the owner, custodian, or authorized agent.

28. Preservation of Documentation: Documentation is an invaluable part of the history of cultural property and should be produced and maintained in as permanent a manner as practicable. Copies of reports of examination and treatment must be given to the owner, custodian, or authorized agent, who should be advised of the importance of maintaining these materials with the cultural property. Documentation is also an important part of the profession's body of knowledge. The conservation professional should strive to preserve these records and give other professionals appropriate access to them, when access does not contravene agreements regarding confidentiality.

Documentation: for professional literature 27

Comment The legal profession with its published jourisprudence, and the medical profession with its epidemiological studies have demonstrated the importance of publishing information about case studies for the benefit of the broader profession. We could progress faster in the quality of our conservation of organs if restorers can be aware of the insights and methods developed by colleagues.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition VII, 30

VII. The conservation professional shall contribute to the evolution and growth of the profession by sharing experience and information with colleagues.

30. Communication
To further the development of the profession, a conservation professional should, where possible, share with colleagues information gained from research, examination, preventive conservation activities or treatment. The peer review system shall be encouraged as part of professional publishing practice.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice (2), 24

(2) Disclosure: In professional relationships, the conservation professional should share complete and accurate information relating to the efficacy and value of materials and procedures. In seeking and disclosing such information, and that relating to analysis and research, the conservation professional should recognize the importance of published information that has undergone formal peer review.

24. Documentation: The conservation professional has an obligation to produce and maintain accurate, complete, and permanent records of examination, sampling, scientific investigation, and treatment. When appropriate, the records should be both written and pictorial. The kind and extent of documentation may vary according to the circumstances, the nature of the object, or whether an individual object or a collection is to be documented. The purposes of such documentation are:
* to establish the condition of cultural property;
* to aid in the care of cultural property by providing information helpful to future treatment and by adding to the profession's body of knowledge;
* to aid the owner, custodian, or authorized agent and society as a whole in the appreciation and use of cultural property by increasing understanding of an object's aesthetic, conceptual, and physical characteristics; and to aid the conservation professional by providing a reference that can assist in the continued development of knowledge and by supplying records that can help avoid misunderstanding and unnecessary litigation.

Documentation: of compensations for loss (current) 28

Comment Future investigators or restorers should be able to discern and read documentation of any component made or affected in the present restoration.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 4.3, 5.1

4.3 Before restoration or reconstruction, a thorough detailed documentation of the organ should be undertaken before the instrument is dismantled. On the basis of this documentation, a work program will be scheduled, which can be adapted to any new factors which may become apparent when the organ is dismantled. The course of the work must be thoroughly recorded in a written report. There may be a need for review of the conservation management plan if significant new information is revealed during dismantling.

5.1 Conjectural construction is outside the scope of usual heritage practice, but may be necessary to bring an organ to complete working condition. It involves the new manufacture of lost or missing parts whose original condition is wholly or partly unknown. That is, no documented construction methods are available. Conjectural construction work on a significant organ should be fully documented and identified and be suited in quality and function to existing work.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice VII, 23

VII. The conservation professional shall document examination, scientific investigation, and treatment by creating permanent records and reports.

23. Compensation for Loss: Any intervention to compensate for loss should be documented in treatment records and reports and should be detectable by common examination methods. Such compensation should be reversible and should not falsely modify the known aesthetic, conceptual, and physical characteristics of the cultural property, especially by removing or obscuring original material.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 4

4. Documentation*
The conservation professional shall document his/her work by recording all essential details of the conservation of a cultural property. The extent and type of documentation will vary with the nature of the cultural property and conservation work required. Documentation is part of the history of the cultural property and shall be produced and maintained in as permanent a manner as is practical. Documentation shall be available for appropriate access when this access does not contravene confidentiality.

Documentation: of condition before treatment 29

Comment Standard conservation documentation includes a succinct description of condition problems in the pre-treatment state. Conservators also consider the cause of the problem, as this affects the solution and possibly future preventive measures. In an organ restoration project, the tonal characteristics, and especially tonal inconsistencies and problems would be noted as well as wind problems all before disassembly of the organ. (Our document would only want to include a couple of examples, rather than prescribe all such observations.)

BIOS 1991 British Institute of Organ Studies 5.13

When work is carried out on a historic organ, the restorer should make a report before he starts, covering the history of the organ and its present condition, as well as detailing the work proposed. He should also keep a record of the work as it is carried out, as well as taking photographs before and after, and taking measurements of those parts of the organ not normally accessible for inspection. A copy of this record should be given to the church or customer. The restorer should allow for the cost of this work in his estimate. Copies of such records sent to BIOS's British Organ Archives are always appreciated, and may provide valuable information for future restorers and researchers.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob (3.3)

Already when the organ is being dismantled, precise documentation has to be implemented at all times, especially of items that are certain not to be used again. All too often, one does not accurately know anymore how it was previously when the final restoration report gets written.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 9, 12, G4.1

9. Examination*
The conservation professional shall make a thorough examination of the cultural property and shall document this examination before performing any conservation treatment. This examination includes a determination of its structure and materials and an assessment of its condition, in particular, the extent of deterioration, alteration and loss. He/she shall study relevant historical and technical records. Where necessary, the conservation professional should initiate analyses of materials and undertake research into historic al, conceptual and technical aspects of the cultural property.

12. Documentation of Examination
The conservation professional shall prepare an examination report (alternatively called 'condition report') that shall identify the cultural property, include all relevant information on its structure, materials, history and condition, and provide the date of the examination. The conservation professional shall provide a copy of the examination report to the owner.

[Definition of] Documentation: . . .
* to record the condition of the cultural property;

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 24, 25

24. Documentation: The conservation professional has an obligation to produce and maintain accurate, complete, and permanent records of examination, sampling, scientific investigation, and treatment. When appropriate, the records should be both written and pictorial. The kind and extent of documentation may vary according to the circumstances, the nature of the object, or whether an individual object or a collection is to be documented. The purposes of such documentation are:

* to establish the condition of cultural property;
* to aid in the care of cultural property by providing information helpful to future treatment and by adding to the profession's body of knowledge;
* to aid the owner, custodian, or authorized agent and society as a whole in the appreciation and use of cultural property by increasing understanding of an object's aesthetic, conceptual, and physical characteristics; and to aid the conservation professional by providing a reference that can assist in the continued development of knowledge and by supplying records that can help avoid misunderstanding and unnecessary litigation.

25. Documentation of Examination: Before any intervention, the conservation professional should make a thorough examination of the cultural property and create appropriate records. These records and the reports derived from them must identify the cultural property and include the date of examination and the name of the examiner. They also should include, as appropriate, a description of structure, materials, condition, and pertinent history.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 3.6, (4.3)

3.6If not already done, a detailed documentation should be undertaken prior to major repair work, and a work program prepared from this documentation.

(4.3)Before restoration or reconstruction, a thorough detailed documentation of the organ should be undertaken before the instrument is dismantled. On the basis of this documentation, a work program will be scheduled, which can be adapted to any new factors which may become apparent when the organ is dismantled. The course of the work must be thoroughly recorded in a written report. There may be a need for review of the conservation management plan if significant new information is revealed during dismantling.

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) II.e.

II-e. description of condition.

Documentation: of examinations, testing, analytical work 30

Comment Standard conservation documentation includes results of testing and analysical work, such as solvent testing for coatings or adhesives, materials identification, etc.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 25

25. Documentation of Examination: Before any intervention, the conservation professional should make a thorough examination of the cultural property and create appropriate records. These records and the reports derived from them must identify the cultural property and include the date of examination and the name of the examiner. They also should include, as appropriate, a description of structure, materials, condition, and pertinent history.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 9, 11, 12

9. Examination*
The conservation professional shall make a thorough examination of the cultural property and shall document this examination before performing any conservation treatment. This examination includes a determination of its structure and materials and an assessment of its condition, in particular, the extent of deterioration, alteration and loss. He/she shall study relevant historical and technical records. Where necessary, the conservation professional should initiate analyses of materials and undertake research into historic al, conceptual and technical aspects of the cultural property.

11. Sampling
In cases where sample material must be taken from a cultural property, prior consent must be obtained from the owner. Only a minimum of sample material shall be removed, and a record of sample removal shall be kept. Where relevant, and with the agreement of the owner, material removed from a cultural property should be retained as par t of the documentation of that cultural property.

12. Documentation of Examination
The conservation professional shall prepare an examination report (alternatively called 'condition report') that shall identify the cultural property, include all relevant information on its structure, materials, history and condition, and provide the date of the examination. The conservation professional shall provide a copy of the examination report to the owner.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide (4.3)

(4.3) Before restoration or reconstruction, a thorough detailed documentation of the organ should be undertaken before the instrument is dismantled. On the basis of this documentation, a work program will be scheduled, which can be adapted to any new factors which may become apparent when the organ is dismantled. The course of the work must be thoroughly recorded in a written report. There may be a need for review of the conservation management plan if significant new information is revealed during dismantling.

Documentation: of historical background from documents 31

Comment Not only should we research documentary information about an organ's past, but we should summarize it as part of the restoration documentation. The organ's actual history forms the basis of many treatment decisions.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 1.1-1.4

1. The first task probably is always the writing or rewriting of an existing "biography" of the instrument to be restored: because, after all, one has to start somewhere with the work. There's nothing wrong with doing this using at first, the available secondary literature. This, however, has to be done with caution: not everything printed coincides with truth. As a matter of principle, question marks have to be placed everywhere. . . .

2. The next step is the research of original sources. Here already the practice is often not up to part because one has to be capable, as well as willing to do this research. One must be able to read ancient writing: one has to take the time to master supposedly illegible hand writings. . . . Research in the archives cannot be limited to finding an original contract. Volumes of church minutes an account books are just as important. It is also wrong to limit researched the time of the construction of the organ. References to later changes are just as important and often allow valuable conclusions, especially when documents from the time of construction are missing. That is why we said earlier that we have to generate the entire quote biography" of the instrument, not only its "birth story."

3. Who is to do this time-consuming and expensive work, one would think this is the most distinguished work of the consultant. In practice one finds, however, that not every consultant is up to this task. And of these, not everybody who could do it will be able to spare the necessary time away from his "official duties." Consequently, this task turns also into an organbuilder's task. Let me remind all authorities here that this always requires a lot of work and must therefore be reimbursed separately. . . .

4. In summation: whether the "biography" is worked out by the consultant or by the organbuilder has to be decided in each individual case based on either party's ability and willingness. This work has to be reimbursed according to the actual number of hours involved regardless of whether or not the search for some documents was always successful.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.5, 4.1

3.5 [archival research is part of the inventory of the organ]
4.1 [archival research is part of the restoration planning process]

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 25

25. Documentation of Examination: Before any intervention, the conservation professional should make a thorough examination of the cultural property and create appropriate records. These records and the reports derived from them must identify the cultural property and include the date of examination and the name of the examiner. They also should include, as appropriate, a description of structure, materials, condition, and pertinent history.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 2

2. Respect for the Integrity of the Cultural Property
When conserving a cultural property, the conservation professional shall respect the integrity of the cultural property by endeavouring to preserve its material composition and culturally significant

qualities through minimal intervention. The original intention, usage, history and evidence of provenance of the property must be respected. This respect for the integrity of the cultural property shall be based upon the study of the cultural property and on consultations with the owner and, when applicable, the originator. When relevant, other authorities or documentary sources should be consulted.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 3.1

3.1
Consultant
the owner, usually a church, appoints a professional consultant. This consultant must be chosen from the limited number of consultants recognized in accepted by the government. He is paid by the church; but his salary and his expenses are part of costs of restoration and are therefore subsidized by 90% as well.

The consultant makes a historical report. If the situation happens to be very complicated, a complete inventory is made before any plans are formed. Among other things this means detailed measuring of scales and careful copying of all inscriptions found on the pipes.

After this has been done a restoration plan is made in close cooperation with the government expert.

BIOS 1991 British Institute of Organ Studies 5.13

When work is carried out on a historic organ, the restorer should make a report before he starts, covering the history of the organ and its present condition, as well as detailing the work proposed. He should also keep a record of the work as it is carried out, as well as taking photographs before and after, and taking measurements of those parts of the organ not normally accessible for inspection. A copy of this record should be given to the church or customer. The restorer should allow for the cost of this work in his estimate. Copies of such records sent to BIOS's British Organ Archives are always appreciated, and may provide valuable information for future restorers and researchers.

Documentation: of materials, structure, alteration evidence 32

Comment This type of description is part of an examination and/or treatment proposal and is more specific to the physical issues that affect the treatment plan.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 1.5

The next step, which of course also could be the first step, is the precise inspection and researching of the instrument itself. In principle I would not keep any consultant from doing this, but it appears much more likely to be an organbuilder's task because the eyes of an elert and experienced craftsman usually see more than do the eyes of even the most intelligent person more at home with office desks and organ consoles. But even the organbuilder has to make every effort to proceed like a clever detective. It is certainly in order to preserve as well as to secure any clue as if it were criminal evidence. Old nail holes, shadow marks, glue traces and things like that start to speak when asked correctly. For specific individual questions, my experience has been that indeed it makes sense to ask the crime laboratory of the police for help. With a reasonable request, usually these facilities will be happy to cooperate. Let me mention a few practical examples:
* To reveal and photograph faded inscriptions (Ultraviolet and infrared photography, x-ray pictures, flurooscope pictures, etc.);
* Age determination of paper, paint, glues.
* Determination of the identity of markings or papers (for example, identical red crayon used in dated inscription and the marking of wood pipes; paper glued to bellows and chest bottoms originating from the same batch).

OHS 1986 Organ Historical Society Guidelines (31)

(3I) It is highly desirable that a restorer keep detailed records, measurements, photographs, etc. during the course of the restoration work. Copies of such records sent to the Archives of the OHS are always greatly appreciated and may provide valuable information to future researchers and restorers.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 9, 17, G4.2

9. Examination*
The conservation professional shall make a thorough examination of the cultural property and shall document this examination before performing any conservation treatment. This examination includes a determination of its structure and materials and an assessment of its condition, in particular, the extent of deterioration, alteration and loss. He/she shall study relevant historical and technical records. Where necessary, the conservation professional should initiate analyses of materials and undertake research into historic al, conceptual and technical aspects of the cultural property.

17. Removal or Alteration of Material
No aspect of a cultural property should be altered nor should material be removed from it without justification. When such removal or alteration is required, those aspects or materials shall first be documented in their existing state. Where relevant, and with the agreement of the owner, material removed from an object shall be retained as part of the documentation of a cultural property.

[Definition of] Documentation: . . .
* to record in formation revealed during examination or other conservation activities that assists in the understanding of the cultural property;

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 25

25. Documentation of Examination: Before any intervention, the conservation professional should make a thorough examination of the cultural property and create appropriate records. These records and the reports derived from them must identify the cultural property and include the date of examination and the name of the examiner. They also should include, as appropriate, a description of structure, materials, condition, and pertinent history.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.6

[Section 3.5 is on organological documentation as a systematic inventory of organ components.]
[Section 3.6 is on treatment documentation including past alterations.]

Documentation: of proposed treatments 33

Comment The treatment proposal includes a detailed description of specific condition issues, and the practitioner's plan for treating each. Besides being the written communication vehicle between owner and practitioner, this document also forms the basis for collaboration between organ restoration specialists and conservation specialist.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 14

14. Treatment Proposal
On the basis of the examination, the conservation professional shall report his/her findings and recommendations in writing to the owner, including justification for and the objectives of the treatment, an estimate of resources required, alternative approaches if feasible, and the potential risks of treatment. The treatment proposal is submitted in order to fully inform the owner and to obtain consent to proceed. For large groups of similar objects (for example library collections, archaeological finds), a treatment proposal may be written for the group as a whole. Any significant changes to the proposed treatment shall be conveyed to the owner and consent must be received before the conservation professional carries out the revised treatment.

BIOS 1991 British Institute of Organ Studies 5.13

When work is carried out on a historic organ, the restorer should make a report before he starts, covering the history of the organ and its present condition, as well as detailing the work proposed. He should also keep a record of the work as it is carried out, as well as taking photographs before and after, and taking measurements of those parts of the organ not normally accessible for inspection. A copy of this record should be given to the church or customer. The restorer should allow for the cost of this work in his estimate. Copies of such records sent to BIOS's British Organ Archives are always appreciated, and may provide valuable information for future restorers and researchers.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 26

26. Treatment Plan: Following examination and before treatment, the conservation professional should prepare a plan describing the course of treatment. This plan should also include the justification for and the objectives of treatment, alternative approaches, if feasible, and the potential risks. When appropriate, this plan should be submitted as a proposal to the owner, custodian, or authorized agent.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 3.1, 3.3

3.1
Consultant
the owner, usually a church, appoints a professional consultant. This consultant must be chosen from the limited number of consultants recognized in accepted by the government. He is paid by the church; but his salary and his expenses are part of costs of restoration and are therefore subsidized by 90% as well.

The consultant makes a historical report. If the situation happens to be very complicated, a complete inventory is made before any plans are formed. Among other things this means detailed measuring of scales and careful copying of all inscriptions found on the pipes.

After this has been done a restoration plan is made in close cooperation with the government expert.

3.3
Definitive Order: The historical reports, the restoration plan and the builders price go along with the application for a subsidy from the government. After the government has granted the subsidy, the organ builder will receive the first payment, which will make the order definite.

Only after the instrument has been dismantled, are the fine details of the restoration plan worked out. Clearly, there are many important decisions that must be postponed until after the contract is been signed in the instrument taken apart for examination.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 4.1, (5.1)

4.1
Now that all additional conclusions from the dismantling of the organ have been recognized, the workplan can be definitely outlined. This, of course, has to be done by cooperation of all involved parties: organbuilder, consultant, monument curator, the organist, church and parish officials. Nobody should be left out, so that everybody possible should support the project. This, of course, by no means guarantees that all wishes of all involved can be accommodated completely. Sometime later we will come back to the inevitable "practical" requests.

5.1
Whoever now, with a detailed work plan in hand, feels safe, often is ill-advised. Like a good detective investigating a case, the restoring organ builder always has to reckon with surprises and unexpected turns of events, or at least never exclude these possibilities.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 6.1

6.1 In respect of all types of conservation work (including repair, restoration and reconstruction) correct procedure must be observed by both organ adviser (consultant) and organbuilder. It is especially important to indicate which parts of the organ are to be renewed. Also during this work, all the required measurements and documentation can be undertaken and completed.

Documentation: of specific interventions (current) 34

Comment This is the heart of conservation documentation, and it is the least often recorded in organ restorations of the past. This is one of the areas where the most improvement is needed in our standards.

These guidelines can be more specific, since they are not about what to do in the restoration itself. For example, guidelines might include comments like the following...

Describe condition problems explicitly. The reader of the report cannot be expected to extrapolate pre-treatment condition problems based on your documentation of the final treatment. If you replaced key action cloth, for example, also document what was there before replacement, and describe its condition and why it had to be replaced. The report should be like "double-entry-accounting" in which condition and treatment are linked one-for-one.

Give clear enough indication of each treatment's location. If a case molding was replaced or a split repaired, indicate where. Sometimes annotating photographs is easier than using words to indicate locations. Then the report can cite the photo to identify locations.

Use active voice and first or second person (I or we did this or that) so your work is clearly distinguished from the work of past restorers. The sentence, "a support block was added" is ambiguous, and could mean it was added by the original maker, a long-past restorer, or by yourself.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 4, 15, 17, 18, G4.3

IV. The conservation professional shall seek to prevent damage and deterioration to a cultural property under his/her care by implementing, or by recommending to the owner, appropriate preventive conservation measures.

15. Documentation of Treatment
Treatment records shall include the date of the treatment, a description of the interventions and of the materials used (with their composition, where known), observations, as well as any details of the structure, materials, condition or relevant history of the cultural property that have been revealed during treatment. From these records a summary shall be prepared in the form of a treatment report. The conservation professional shall provide the owner with this report and shall stress the importance of maintaining the report as part of the history of the cultural property.

17. Removal or Alteration of Material
No aspect of a cultural property should be altered nor should material be removed from it without justification. When such removal or alteration is required, those aspects or materials shall first be documented in their existing state. Where relevant, and with the agreement of the owner, material removed from an object shall be retained as part of the documentation of a cultural property.

18. Restoration* and Reconstruction*
Restoration and reconstruction are means of re-establishing culturally significant qualities of a cultural property. If undertaken they shall be fully documented and shall be carried out without fraudulent intent and to the minim um extent necessary. The presence and extent of any restoration or reconstruction must be detectable, though they need not be conspicuous.

[From definition of] Documentation:
* to record the changes to the property due to conservation activities, and the justification for those changes;

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice VII, 27

VII. The conservation professional shall document examination, scientific investigation, and treatment by creating permanent records and reports.

27. Documentation of Treatment: During treatment, the conservation professional should maintain dated documentation that includes a record or description of techniques or procedures involved, materials used and their composition, the nature and extent of all alterations, and any additional information revealed or otherwise ascertained. A report prepared from these records should summarize this information and provide, as necessary, recommendations for subsequent care.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 4.3

4.3 Before restoration or reconstruction, a thorough detailed documentation of the organ should be undertaken before the instrument is dismantled. On the basis of this documentation, a work program will be scheduled, which can be adapted to any new factors which may become apparent when the organ is dismantled. The course of the work must be thoroughly recorded in a written report. There may be a need for review of the conservation management plan if significant new information is revealed during dismantling.

BIOS 1991 British Institute of Organ Studies 5.13

When work is carried out on a historic organ, the restorer should make a report before he starts, covering the history of the organ and its present condition, as well as detailing the work proposed. He should also keep a record of the work as it is carried out, as well as taking photographs before and after, and taking measurements of those parts of the organ not normally accessible for inspection. A copy of this record should be given to the church or customer. The restorer should allow for the cost of this work in his estimate. Copies of such records sent to BIOS's British Organ Archives are always appreciated, and may provide valuable information for future restorers and researchers.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.6

[Section 3.6 is on treatment documentation.]

Documentation: of specifications (organological or equivalent) 35

Comment Organological documentation is relevant to conservation, especially in making judgments about the state to which an organ should be restored, and the historical importance of one campaign of alteration over another. However, this more common type of documentation (orgnological) should never be confused with or take the place of actual treatment documentation.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 24·3

[24·3] to aid the owner, custodian, or authorized agent and society as a whole in the appreciation and use of cultural property by increasing understanding of an object's aesthetic, conceptual, and physical characteristics; and to aid the conservation professional by providing a reference that can assist in the continued development of knowledge and by supplying records that can help avoid misunderstanding and unnecessary litigation.

OHS 1986 Organ Historical Society Guidelines (31)

(3I) It is highly desirable that a restorer keep detailed records, measurements, photographs, etc. during the course of the restoration work. Copies of such records sent to the Archives of the OHS are always greatly appreciated and may provide valuable information to future researchers and restorers.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 3.1

3.1
Consultant
the owner, usually a church, appoints a professional consultant. This consultant must be chosen from the limited number of consultants recognized in accepted by the government. He is paid by the church; but his salary and his expenses are part of costs of restoration and are therefore subsidized by 90% as well.

The consultant makes a historical report. If the situation happens to be very complicated, a complete inventory is made before any plans are formed. Among other things this means detailed measuring of scales and careful copying of all inscriptions found on the pipes.

After this has been done a restoration plan is made in close cooperation with the government expert.

RE 1981 Wegscheider & Werner "Richtlinien..." 3.5

[Section 3.5 is on organological documentation as a systematic inventory of organ components.]

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) II

II -- Inventory taking (cataloguing)
1. Cataloguing must precede work on organ conservation. This should be carried out according to the following guidelines:
a) determine the number of organs worthy of preservation;
b) make a survey of the exterior (i.e. the case);
c) make a survey of the instrument according to:
- type of (Windladen = wind boxes?) and their assemblage,
- type of (Traktur),
- note arrangement(s) (with tonal ranges and coupling)
- note mixed voices
- list the construction materials,

· note wind pressures (?, Winddruecke),
· note tuning pitch level (?, Stimmtonhoehe), and possibly pitch (?, Stimmung);

d) Determine the date of construction, builder, and all possible alterations and repairs (with mention of sources);

2.Usually at this point measurements of the diapason (?, Mensuren) of the organ pipes should be reproduced if the instrument is to be taken down (for example, for repair work).

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 9

9. Examination*
The conservation professional shall make a thorough examination of the cultural property and shall document this examination before performing any conservation treatment. This examination includes a determination of its structure and materials and an assessment of its condition, in particular, the extent of deterioration, alteration and loss. He/she shall study relevant historical and technical records. Where necessary, the conservation professional should initiate analyses of materials and undertake research into historic al, conceptual and technical aspects of the cultural property.

Professional Conduct: Acknowledge personal limitations and special skills of colleagues and allied professionals 37

Comment Organs are highly complex, and so is the separate discipline of conservation. In the past, organ restorations have been limited to the skill set of organ builders, without any help from conservation specialists, and perhaps sometimes from other relevant craft practitioners. It would be appropriate to include something in the guidelines to encourage collaborations, especially between the organ and conservation spheres to improve the prospects for restorative conservation.

ICOM 1984 International Council Of Museums: Code of Ethics 3.3, 3.5, 3.8

3.3 Because the risk of harmful manipulation or transformation of the object is inherent in any measure of conservation or restoration, the conservator-restorer must work in the closest cooperation with the curator or other relevant scholar. Together they must distinguish between the necessary and the superfluous, the possible and the impossible, the intervention that enhances the qualities of the object and that which is detrimental to its integrity.

3.5 Therefore, all interventions must be preceded by a methodical and scientific examination aimed at understanding the object in all its aspects, and the consequences of each manipulation must be fully considered. Whoever, for lack of training, is unable to carry out such examinations or whoever, for lack of interest or other reasons neglects to proceed in this way cannot be entrusted with the responsibility for treatment. Only a well-trained and experienced conservator-restorer can correctly interpret the results of such examinations and foresee the consequences of the decisions made.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice IV, XI, 10

IV. The conservation professional shall practice within the limits of personal competence and education as well as within the limits of the available facilities.

IX. The conservation professional shall act with honesty and respect in all professional relationships, seek to ensure the rights and opportunities of all individuals in the profession, and recognize the specialized knowledge of others.

10. Consultation: Since no individual can be expert in every aspect of conservation, it may be appropriate to consult with colleagues or, in some instances, to refer the owner, custodian, or authorized agent to a professional who is more experienced or better equipped to accomplish the required work. If the owner requests a second opinion, this request must be respected.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition V, 5

V. The conservation professional shall recognize his or her limitations and the special skills and knowledge of others.

5. Recognition of Limitations
The conservation professional shall carry out only that work which is within the limits of his/her professional competence and facilities. When a conservation professional is asked to provide a ser vice beyond t he limits of his /her competence, the assistance of a qualified professional shall be sought o r the work shall be referred or subcontracted to a qualified professional.

RE 1981 Wegscheider & Werner "Richtlinien..." (1)

p.7 [The authors continue to emphasize the importance of discussions with the owner/employer, the

representative for historic preservation and the organ-builder, prior to interventions. Organ-builders mainly work with new instruments, and the danger here is that these modern methods may be applied to interior structures or alterations of historically valuable organs]

For restorations or other measures to succeed, it is better if an organ-builder familiar with historic organ construction carries out the whole work.

Professional Conduct: Cautions about conflicts of interest 38

Comment This is more about professional standards and not restorative conservation guidelines. Should we leave such things for the American Institute of Organbuilders to recommend?

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 14, 15

14. Conflict of Interest: The conservation professional should avoid situations in which there is a potential for a conflict of interest that may affect the quality of work, lead to the dissemination of false information, or give the appearance of impropriety.

15. Related Professional Activities: The conservation professional should be especially mindful of the considerable potential for conflict of interest in activities such as authentication, appraisal, or art dealing.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 39

39. Conflict of Interest
The conservation professional shall not enter knowingly into contractual or other working arrangements or agreements which place the conservation professional in a position of conflict of interest. The conservation professional shall be especially mindful of the considerable potential for conflict of interest in activities such as authentication, appraisal or art dealing. The potential for conflict of interest also exists when a conservation professional employed by an institution, studio, workshop or similar business engages in freelance conservation work.

Professional Conduct: Communication with owner; consent 39

Comment This is more about professional standards and not restorative conservation guidelines. Should we leave such things for the American Institute of Organbuilders to recommend?

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 10, 11, 14

10. Risks of Examination
Before undertaking any examination which may result in a change in the cultural property, the conservation professional shall establish the necessity for such an examination and receive permission to proceed from the owner.

11. Sampling
In cases where sample material must be taken from a cultural property, prior consent must be obtained from the owner. Only a minimum of sample material shall be removed, and a record of sample removal shall be kept. Where relevant, and with the agreement of the owner, material removed from a cultural property should be retained as par t of the documentation of that cultural property.

14. Treatment Proposal
On the basis of the examination, the conservation professional shall report his/her findings and recommendations in writing to the owner, including justification for and the objectives of the treatment, an estimate of resources required, alternative approaches if feasible, and the potential risks of treatment. The treatment proposal is submitted in order to fully inform the owner and to obtain consent to proceed. For large groups of similar objects (for example library collections, archaeological finds), a treatment proposal may be written for the group as a whole. Any significant changes to the proposed treatment shall be conveyed to the owner and consent must be received before the conservation professional carries out the revised treatment.

RE 1981 Wegscheider & Werner "Richtlinien..." 4.1

4.1 Procedure. This concerns work other than general maintenance:
* The owner will contact the organ-builder,
* and the latter will examine the organ
* A work plan is established by the organ-builder
* Experts are designated by owner and monument protection society
* Archives are studied by experts and organ-builder
* They will inspect the organ

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 5, 6

5. Communication: Communication between the conservation professional and the owner, custodian, or authorized agent of the cultural property is essential to ensure an agreement that reflects shared decisions and realistic expectations.

6. Consent: The conservation professional should act only with the consent of the owner, custodian, or authorized agent. The owner, custodian, or agent should be informed of any circumstances that necessitate significant deviations from the agreement. When possible, notification should be made before such changes are made.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 4.1

4.1

Now that all additional conclusions from the dismantling of the organ have been recognized, the workplan can be definitely outlined. This, of course, has to be done by cooperation of all involved parties: organbuilder, consultant, monument curator, the organist, church and parish officials. Nobody should be left out, so that everybody possible should support the project. This, of course, by no means guarantees that all wishes of all involved can be accommodated completely. Sometime later we will come back to the inevitable "practical" requests.

Professional Conduct: Conservator/Restorer must recognize significant elements and proceed accordingly 40

Comment Judgments about preservation worthiness must be made not only for an entire instrument, but on a minute-by-minute basis during treatment. This is because treatment intrudes on surface evidence, and practitioners need to be able to recognize when something is important not only for their own interests, but the interests of other stakeholders.

Note that the organ guidelines have tended to slant this to protect their authority in forming all such judgments, but notice also the language used by the AIC, CAC, and ICOM.

ICOM 1984 International Council Of Museums: Code of Ethics 3.4

3.4 The conservator-restorer must be aware of the documentary nature of an object. Each object contains - singly or combined - historic, stylistic, iconographic, technological, intellectual, aesthetic and/or spiritual messages and state that.encountering these during research and work on the object, the conservator-restorer should be sensitive to them, be able to recognize their nature, and be guided by them in the performance of his task.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice II, 21

II. All actions of the conservation professional must be governed by an informed respect for the cultural property, its unique character and significance, and the people or person who created it.

21. Suitability: The conservation professional performs within a continuum of care and will rarely be the last entrusted with the conservation of a cultural property. The conservation professional should only recommend or undertake treatment that is judged suitable to the preservation of the aesthetic, conceptual, and physical characteristics of the cultural property. When nonintervention best serves to promote the preservation of the cultural property, it may be appropriate to recommend that no treatment be performed.

OHS 1986 Organ Historical Society Guidelines 3J

3J. Restoration of historic organs should always be done by an experienced professional restorer specializing in work on the particular type of organ involved and never entrusted to unsupervised amateurs. For the sake of the owner's own financial investment as well as the preservation of the organ, it is incumbent upon the owners of historic instruments to thoroughly investigate the reputation, previous work, and references of any prospective restorer. Quality of work, rather than price, should be the criterion in the choice of a restorer. A fine and historic organ may be irreparably altered or damaged by incompetent or unqualified workers but a well-restored historic organ can be a musical treasure and a legacy to future generations.

OHTA 1998 Organ Historical Trust of Australia: Conservation and Maint. Guide 3.5

3.5 For any repair work, section 2.2 above is to be strictly adhered to. Therefore, only an organbuilder who possesses a personal and professional guarantee that the work will be carried out faultlessly in accordance with the assessment of significance may be entrusted with repair work on historic organs. Above all, the organbuilder must have experience in the type of work to be undertaken.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition II

II. In the conservation* of cultural property, all actions of the conservation professional must be governed by an informed respect for the integrity of the property, including physical, conceptual, historical and aesthetic considerations.

Jakob 1990 Basic Remarks about Organ Restoration, Friedrich Jakob 1.5

The next step, which of course also could be the first step, is the precise inspection and researching of the instrument itself. In principle I would not keep any consultant from doing this, but it appears much more likely to be an organbuilder's task because the eyes of an elert and experienced craftsman usually see more than do the eyes of even the most intelligent person more at home with office desks and organ consoles. But even the organbuilder has to make every effort to proceed like a clever detective. It is certainly in order to preserve as well as to secure any clue as if it were criminal evidence. Old nail holes, shadow marks, glue traces and things like that start to speak when asked correctly. For specific individual questions, my experience has been that indeed it makes sense to ask the crime laboratory of the police for help. With a reasonable request, usually these facilities will be happy to cooperate. Let me mention a few practical examples:

* To reveal and photograph faded inscriptions (Ultraviolet and infrared photography, x-ray pictures, flurooscope pictures, etc.);
* Age determination of paper, paint, glues.
* Determination of the identity of markings or papers (for example, identical red crayon used in dated inscription and the marking of wood pipes; paper glued to bellows and chest bottoms originating from the same batch).

Professional Conduct: Declaring age, origin or authenticity 41

Comment Organ restorers should be aware of the conflict of interest that can occur in authenticating historic organs. This may be something that would be addressed in another professional ethics document, but not the present Guidelines.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice 18

18. Interpretation: Declarations of age, origin, or authenticity should be made only when based on sound evidence.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 39

39. Conflict of Interest
...The conservation professional shall be especially mindful of the considerable potential for conflict of interest in activities such as authentication, appraisal or art dealing.

ICOM 1984 International Council Of Museums: Code of Ethics 2.2

2.2 Conservator-restorer work in museums, in official heritage protection services, in private conservation enterprises or independently. Their task is to comprehend the material aspect of objects of historic and artistic significance in order to prevent their decay, and to enhance our understanding of them so as [to] further the distinction between what his original and what is spurious.

Professional Conduct: Disclosure of procedures and materials for development of the discipline 42

Comment This is an incouragement to restorers and conservators to give workshops or write articles to offer new insights and methods to others for the benefit of historic organs. Harboring "trade secrets" may be thought to help a practitioners business but only at the expense of the greater good.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 4, 30

4. Documentation*
The conservation professional shall document his/her work by recording all essential details of the conservation of a cultural property. The extent and type of documentation will vary with the nature of the cultural property and conservation work required. Documentation is part of the history of the cultural property and shall be produced and maintained in as permanent a manner as is practical. Documentation shall be available for appropriate access when this access does not contravene confidentiality.

30. Communication
To further the development of the profession, a conservation professional should, where possible, share with colleagues information gained from research, examination, preventive conservation activities or treatment. The peer review system shall be encouraged as part of professional publishing practice.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice X, 2

X. The conservation professional shall contribute to the evolution and growth of the profession, a field of study that encompasses the liberal arts and the natural sciences. This contribution may be made by such means as continuing development of personal skills and knowledge, sharing of information and experience with colleagues, adding to the profession's written body of knowledge, and providing and promoting educational opportunities in the field.

2. Disclosure: In professional relationships, the conservation professional should share complete and accurate information relating to the efficacy and value of materials and procedures. In seeking and disclosing such information, and that relating to analysis and research, the conservation professional should recognize the importance of published information that has undergone formal peer review.

OHS 1986 Organ Historical Society Guidelines 31

3I It is highly desirable that a restorer keep detailed records, measurements, photographs, etc. during the course of the restoration work. Copies of such records sent to the Archives of the OHS are always greatly appreciated and may provide valuable information to future researchers and restorers.

Professional Conduct: Guidelines for relationships between practitioner and owners, colleagues, and public 43

Comment This is more about professional standards and not restorative conservation guidelines. Should we leave such things for the American Institute of Organbuilders to recommend?

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice IX, 7, 8, 9, 11, 12

IX. The conservation professional shall act with honesty and respect in all professional relationships, seek to ensure the rights and opportunities of all individuals in the profession, and recognize the specialized knowledge of others.

7. Confidentiality: Except as provided in the Code of Ethics and Guidelines for Practice, the conservation professional should consider relationships with an owner, custodian, or authorized agent as confidential. Information derived from examination, scientific investigation, or treatment of the cultural property should not be published or otherwise made public without written permission.

8. Supervision: The conservation professional is responsible for work delegated to other professionals, students, interns, volunteers, subordinates, or agents and assignees. Work should not be delegated or subcontracted unless the conservation professional can supervise the work directly, can ensure proper supervision, or has sufficient knowledge of the practitioner to be confident of the quality of the work. When appropriate, the owner, custodian, or agent should be informed if such delegation is to occur.

9. Education: Within the limits of knowledge, ability, time, and facilities, the conservation professional is encouraged to become involved in the education of conservation personnel. The objectives and obligations of the parties shall be agreed upon mutually.

11. Recommendations and References: The conservation professional should not provide recommendations without direct knowledge of a colleague's competence and experience. Any reference to the work of others must be based on facts and personal knowledge rather than on hearsay.

12. Adverse Commentary: A conservation professional may be required to testify in legal, regulatory, or administrative proceedings concerning allegations of unethical conduct. Testimony concerning such matters should be given at these proceedings or in connection with paragraph 13 of these Guidelines.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition I, II, IV, VII, VIII, IX, 1, 2, 23, 24, 27, 28, 29, G4.5

I. It is the responsibility of the conservation professional*, acting alone or with others, to strive constantly to maintain a balance between the need in society to use a cultural property*, and to ensure the preservation * of that cultural property.

II. In the conservation* of cultural property, all actions of the conservation professional must be governed by an informed respect for the integrity of the property, including physical, conceptual, historical and aesthetic considerations.

IV. The conservation professional shall seek to prevent damage and deterioration to a cultural property under his/her care by implementing, or by recommending to the owner, appropriate preventive conservation measures.

VII. The conservation professional shall contribute to the evolution and growth of the profession by sharing experience and information with colleagues.

VIII. The conservation professional shall act with honesty and integrity in all professional relationships, recognize the rights of all colleagues and respect the profession as a whole.

IX. The conservation professional shall seek to promote an awareness and understanding of conservation through communication with those who have a vested interest in the cultural property, with other professionals and with members of the public.

1. Shared Responsibility
The care and treatment* of a cultural property* is the shared responsibility of the owner*, the conservation professional* and when applicable , the originator*.

2. Respect for the Integrity of the Cultural Property
When conserving a cultural property, the conservation professional shall respect the integrity of the cultural property by endeavouring to preserve its material composition and culturally significant qualities through minimal intervention. The original intention, usage, history and evidence of provenance of the property must be respected. This respect for the integrity of the cultural property shall be based upon the study of the cultural property and on consultations with the owner and, when applicable, the originator. When relevant, other authorities or documentary sources should be consulted.

23. Relationship with the Owner
The conservation professional shall strive to establish a relationship with the owner based on mutual trust and respect. He/she shall communicate openly and clearly with the owner so that there is a thorough understanding of risks and responsibilities, and that agreements between the two parties reflect shared decisions and realistic expectations.

24. Confidentiality
The conservation professional shall consider relationships with an owner as confidential. Information pertaining to the cultural property derived from examination, scientific investigation or treatment of the cultural property shall not be published or otherwise made public without permission of the owner, unless failure to convey the information would support an illegal or an unethical act. The conservation professional shall not take personal, financial or other advantage of this information nor allow others to take advantage of this information unless the owner consents.

27. Consent of the Owner
The informed consent of the owner must be obtained prior to a direct intervention which may result in a change in the cultural property. It is prudent to obtain the owner's consent in writing in order to avoid misunderstandings and to support the legal rights and responsibilities of the parties involved.

28. Request for a Second Opinion

If, for any reason, before or during treatment, the owner requests the opinion of another conservation professional, this request shall be respected by the original conservation professional. The conservation professional should assist the owner in obtaining a second opinion.

29. In Case of Disagreement
Should the conservation professional and the owner disagree over a proposed treatment o r care of a cultural property, they should review the situation, if necessary in consultation with other specialists in the field, to ensure that the nature of the problems and implications of the treatment or care are fully understood. The conservation professional maintains the right of refusal to undertake any treatment or procedure which he/she considers to be contrary to the terms and intent of the Code of Ethics and Guidance for Practice.

[Definition of] Documentation:
* to record agreements or understandings between the conservation professional and the owner

WR 1957 Weilheimer Regulativ (by a consortium of organ builders) VII

VII. Procedure
All measures concerning organ instruments worthy of preservation such as: Maintenance, Repairs, Restoration (reconstruction), Alterations and extensions
shall only be undertaken following an agreement with the church administration and the state department for preservation of monuments.

Dutch 1980 Organ Policy of the Dutch Office of Monuments (Flentrop & Vente article) 3.4, Conclusion

3.4 Responsibilities
The consultant or expert for the owner of the organ is responsible for steady progress of the work, the regular contact between all concerned, and especially for communication with the government's expert.

In addition, there is a yearly meeting of the "Organ Restoration Circle", which is comprised of the government expert, independent experts, and organ builders. In this annual exchange, problems of recent restorations are discussed in data presented for the common benefit.

Conclusion: The general basics mentioned above our check very checked for each restoration; special solutions come out of these consultations sometimes. The rules themselves are authoritarian but their use so far is felt as most advantageous. The planning and restoration itself continues with closest cooperation of all participants.

RE 1981 Wegscheider & Werner "Richtlinien..." 1, 4.1

4.1 Procedure. This concerns work other than general maintenance:
* The owner will contact the organ-builder,
* and the latter will examine the organ
* A work plan is established by the organ-builder
* Experts are designated by owner and monument protection society
* Archives are studied by experts and organ-builder
* They will inspect the organ

Professional Conduct: Personal health and safety standards 44

Comment This is more about professional standards and not restorative conservation guidelines. Should we leave such things for the American Institute of Organbuilders to recommend?

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice XII, 4a

XII. The conservation professional shall practice in a manner that minimizes personal risks and hazards to co-workers, the public, and the environment. XIII. Each conservation professional has an obligation to promote understanding of and adherence to this Code of Ethics.

4a. Health and Safety: The conservation professional should be aware of issues concerning the safety of materials and procedures and should make this information available to others, as appropriate.

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition 43

43. Safety
The conservation professional shall comply with safety regulations and use techniques and materials in a responsible manner to minimize hazards to people and the environment. He/she shall be aware of the safety issues associated with materials and procedures and ad just his/her work accordingly. The conservation professional shall make this information available to others who may be affected. The conservation professional shall inform the owner of known hazards that are inherent to the cultural property or to its normal use. He/she shall ensure that a cultural property intended for use meets safety and regulatory requirements.

Professional Conduct: Strive for professional excellence / Professional Development 45

Comment This is more about professional standards and not restorative conservation guidelines. Should we leave such things for the American Institute of Organbuilders to recommend?

CAC 2000 Canadian Assoc. for Cons. Code of Ethics and Guidance for Practice, 2nd Edition I, III, VI, 6

I. It is the responsibility of the conservation professional*, acting alone or with others, to strive constantly to maintain a balance between the need in society to use a cultural property*, and to ensure the preservation * of that cultural property.

II. In the conservation* of cultural property, all actions of the conservation professional must be governed by an informed respect for the integrity of the property, including physical, conceptual, historical and aesthetic considerations.

VI. The conservation professional shall continue to develop knowledge and skills with the aim of improving the quality of his/her professional work.

6. Profess ional Development
The conservation professional shall strive to improve his/her knowledge and skills and keep abreast of current developments through continuing study and through communication with conservation professionals and others.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice I

I. The conservation professional shall strive to attain the highest possible standards in all aspects of conservation, including, but not limited to, preventive conservation, examination, documentation, treatment, research, and education.

AIC 1994 American Institute for Conservation, Code of Ethics and Guidelines for Practice (I)

(I.) The conservation professional shall strive to attain the highest possible standards in all aspects of conservation, including, but not limited to, preventive conservation, examination, documentation, treatment, research, and education.

ICOM 1984 International Council Of Museums: Code of Ethics 5

5. [this section goes into detail about what constitutes the training and education of a conservator-restorer]

5.1 To conforme to the above professional characteristics and specifications, conservator-restorer must receive artistic, technical and scientific training based upon a well-rounded, general education.

5.2 training should involve the development of sensitivity and manual skill, the acquisition of theoretical knowledge about materials and techniques, and rigorous grounding in scientific methodology to foster the capacity to solve conservation problems by following a systematic approach, using precise research and critically interpreting the results.

5.3 theoretical training and education should include the following subjects:
* history of art and civilizations
* methods of research and documentation design
* knowledge of technology and materials

* Conservation theory and ethics
* conservation-restoration history and technology
* Chemistry, biology and physics of deterioration processes and of conservation methods

5.4 It is understood that an internship is an essential part of any training program. Training should be terminated by a thesis or diploma paper, and its completion recognized by the equivalent of a university graduate degree.

5.5 At all stages in this training, major emphasis should be placed on practice, but site should never be lost of the need to develop and sharpen an understanding of technical, scientific, historical, and aesthetic factors. The ultimate aim of training is to develop thoroughly rounded professionals, capable thoughtfully to perform highly complex conservation interventions and to thoroughly document them in order that the work and the records contribute not only to the preservation but to a deeper understanding of historical and artistic events related to the objects under treatment.