

BASIC REMARKS ABOUT ORGAN RESTORATION

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Introduction

Based on many years of experience in dealing with old organs as well as dealing with organ consultants, organists, architects, curators of monuments, and church officials, would like to make some general remarks here that are valid beyond the individual case about what I consider correct and useful procedures in restoring organs. There certainly is no dearth of existing "instructions" (e.g. "Weilheimer Regulativ 1958", etc.). However, these often rather outdated guidelines deal insufficiently with the actual practice. In the meantime, also, opinions of the organ world and doctrines of monument preservation have changed substantially.

1. Preparatory work

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 is 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. The existing literature in a way serves only to gain access to the actual problem at hand. One saves some time that way. That way one knows better approximately what time frames need more thorough research.

The next step is the research of original sources. Here already the practice is often not up to par because one has to be able 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 handwritings. And above all: one oneself has to work in these archives, really get personal access, and never simply to accept wellmeaning information from pastors or schoolmasters (who claim to know the archive like the back of their hand). Research into archives cannot be limited to finding an original contract. Volumes of church minutes and account books are just as important. It is also wrong to limit research to 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 "biography" of the instrument, not only its "birth story."

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 separate

ly. It is unconscionable to burden the organbuilder with this preparatory work as part of a free, non-binding offer only to simply take the fruits of his labour.

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.

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 alert 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 fluoroscope 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);

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.

2. Development of a project outline

Working out the "biography" of an organ based on archival material gives a certain general idea about the instrument. The researcher, after all, cannot avoid interpreting his sources. Based on his general knowledge of organ history and the information found, he now has a more or less clear first picture about the organ, which I here want to call "Picture A."

The examination of the instrument itself yields another, often quite different, second picture, which I will call "Picture B." Depending on the size of the task and the personal possibilities, it may serve the purpose best to engage different people for "A" and "B," who should develop their picture independently and without preconceived notions.

Only in the next phase will the independently generated pictures, "A" and "B" be compared. Certainly the two pictures will not be congruous everywhere. Now, in a second "reading," the discrepancies must be clarified and resolved. To this end, the actual findings at the instrument are of much greater importance than written documents or contract wordings. Which organbuilder today would not be able to tell about cases in which the execution differs from the contract wording? It was no different then; quite the contrary. From comparison of pictures "A" and "B" and elimination of discrepancies results "Picture C," which with some probability comes close to the truth.

Only now, with full knowledge 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 hiding 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.

3. Dismantling of the instrument

Many questions regarding a restoration can only be answered when the dismantling of the instrument takes place, because many parts are inaccessible and invisible when the instrument is still intact.

This brings great problems for the owner of the organ. It is of course clear that this dismantling of the organ is most sensibly done by the organbuilder who will do the restoration. That means that the owner has to decide on an organbuilding firm before the project execution has been clearly defined, which means also before a final price can be in place. Therefore, the accurate price is first replaced by a price outline.

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.

Usually, new things are discovered during disassembly and careful inspection, As long as this involves only filling in of former "blanks," there are no problems. If, however, completely new facts become visible, one has to have the courage to question the project outline and to change it as may be the case. I especially appeal here to the wisdom and insight of the consultants. A self-righteous insistence on a perhaps laboriously worked out concept does not serve the cause. In this necessary discussion, power plays are out of place; only objective arguments based on facts are in order.

4. The work plan

Now that all additional conclusions from the dismantling of the organ have been recognized, the work plan 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.

With the precise delineation of the project at hand, a more precise contract price instead of the previous price outline can now be set. As a rule, however, even in the contract, some specific items have to remain open to be invoiced at cost within a price outline. Often this applies, for example, to the item "pipes." The price of a brand new Octave 2' can be quoted accurately and firmly. However, an item "lengthening of pipes" when reconstructing a lower price or mean tone temperament may have to remain open: the amount of work required is determined only during the actual voicing and tuning. It is senseless to lengthen everything "just in case," only to cut it off again later.

5. The surprises

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

I think here not even primarily of bad financial surprises, because from my own experience, one should be all right if one figures a 10-15 % safety margin for the price outline and items to be billed at cost.

I'm talking more about factual surprises. Suddenly in a hidden place, one finds an organbuilder's inscription that completely changes the assessment of the instrument, requiring consideration of completely different instrument for comparison. Ripping a toeboard, suddenly it appears that the mixture had originally 6 rather than 4 ranks, as written in the original contract. Or, one discovers that the toeholes in a low octave originally were square instead of round (meaning wood pipes instead of metal pipes). All during the work, one has to keep a watchful eye on such and similar details.

6. Proceeding with caution

Already from the previous sections, it is clear that in restoration caution is of utmost importance. One must patiently and carefully feel one's way into the work and its problems. Daring and decisive impulsiveness is as much out of place as aimless generalizations and is dangerous. One also must avoid preconceived opinions.

For two items, this cautious proceeding is of particular importance: for the determination of the wind pressure and pitch as well as temperament system. These items should never be fixed in advance.

The appropriate wind pressure is most advantageously determined purely by experimentation. The pipe work, or, more accurately, a representative sampling of the original material, shall be neatly rounded and toeholes, windways, etc., put into the assumed original condition. Then one tests on how much windpressure these pipes speak their best. As long as reasonable values result, the pressure should be fixed at this empirically determined value. Roughly: one should fit the pressure to the pipes, and not the other way around and then try to force the voicing to that pressure.

A similarly careful process is indicated regarding the temperament. Sometimes it is possible to determine the original temperament by careful setting of the original tuning slots or coning of the pipes (e.g., the Gabler Temperament in Weingarten). Obviously, pipes should not have been cut to length carelessly. It's always worth the effort to look for the original pitch. For heaven's sake don't decide in the preliminary bid request that it must be Werckmeister II.

It is part of the required caution also not to set the dedication date prior to or at the beginning of the work, perhaps because that's the day the Bishop happens to have open on his calendar. A good organbuilder does not slow down just because there is no threat of a dead-line. But a good thing takes time.

7. Improvements and "improvements"

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 AGO 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 sometimes 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.

8. "Guidelines for historic preservation"

Perhaps it is because of man's belief in authority that often we think historic preservation and its basic rules are simply given laws of nature. That, of course, is not so at all. Historic preservation as we understand it today is a luxury that only modern industrial countries can afford. Its maxims are subject to change, even fashion, and one can certainly discern substantial differences from country to country.

This is not the place to explore the history and changes in historic preservation in detail. Only a few minor items that directly relate to the problem of organ restoration shall be mentioned here.

What, after all, is worthy of historic preservation? Present artistic creativity, certainly not, people everywhere seem to agree. Usually a period of about fifty year 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.

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.

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 conciliation," 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 a restoration.

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 curator 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).

There are good arguments for both of these rules. After all, these are only rules, opinions and beliefs that are all subject to change with time.

9. The compromises

"Restoration without compromise" is a slogan we hear often today and is certainly at first the correct goal of any restorer. Experience shows, however, that probably in every restoration, compromises have to be made in some respect.

In my experience there are three categories, three degrees of compromise. The first concerns changes that are simply necessary to have the organ function as a technical "apparatus" with reasonable certainty. While in restoring a fresco, the missing foot or missing wing of an angel's figure can easily be left off, an organ has always to be restored in a holistic fashion.

The missing old blowing plant cannot simply be left off. Here the otherwise outdated method of creative interpretation has to be employed again. Not only missing parts but also existing but illfunctioning parts deserve new creations. The organ's owners as well as curators expect from the organbuilder an instrument that functions without trouble. Therefore, an organ restorer usually has to make considerably more modifications and new parts than would be required of the restorer of a painting. All materials subject to wear, such as leather, felt, springs, axles, bearings, etc., may require reworking or replacement. We did not even mention the great need of renovation required on more recent pneumatic and electric action monument organs (membranes, pouches, magnets, contacts).

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 windsystem 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.

The third category of compromise results often 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:

- extension of the manual compass from C3 to d3 or f3 to g3
- extension of the Pedal range to d1 or f1;
- filling in of the short low octave (C#, D#, F#, G#);
- addition of several stops;
- addition of other divisions (second or third manual);
- changes in the stop list (substitution of existing stops by other supposedly "more useful" stops);
- modification of console dimensions to present-day standards;
- addition of some combination action;
- change of the organ's pitch (standard pitch for ensemble playing);
- change of the temperament (water down the planned mean tone system, etc.);
- inclusion of a new music cabinet, a hymn-posting board, a telephone, a warning light.

One could add to this list such important matters as to move the organ back (to get more room for the choir) and other things.

How should one react to such requests and impositions? Of course, the greatest restraint is required, but the advice to deny any request without compromise is too simple and, in practical terms, of little help. One often achieves less by indignant rejection than by factual conversation and carefully prepared information throughout all steps. One should get people to the point where they realize themselves that their request does not make sense. In these matters, unfortunately, the consultants often conspire with the organist instead of being true wardens of the instrument. They have to be convinced and won over first.

A few basic rules apply to weighing carefully where in a specific case one should give in:

- Changes that lead to a permanent loss of the organ's substance are very problematic and certainly should be avoided.
- Changes that remain reversible without great loss of substance may be considered.
- With replacement parts that have to be made anyhow in the spirit of the original, one has greater freedom. Example: when a slider chest for an old case has to be made new (if, for instance, the organ in the meantime had been pneumatic), a "missing" stop of the original stop list or "missing" notes may be added as long as there is room and the interior order of the work remains intact.

Every organbuilder has to decide for himself how much to give in each case. Nobody can take his responsibility away from him, neither consultant nor curator nor owner.

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English translation by Fritz Noack

Epilog

This article is based on experience gained in the course of restoration work on the following organs, among others. The principles derived from this experience are universally valid, being independent of various technical systems and tonal styles.

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