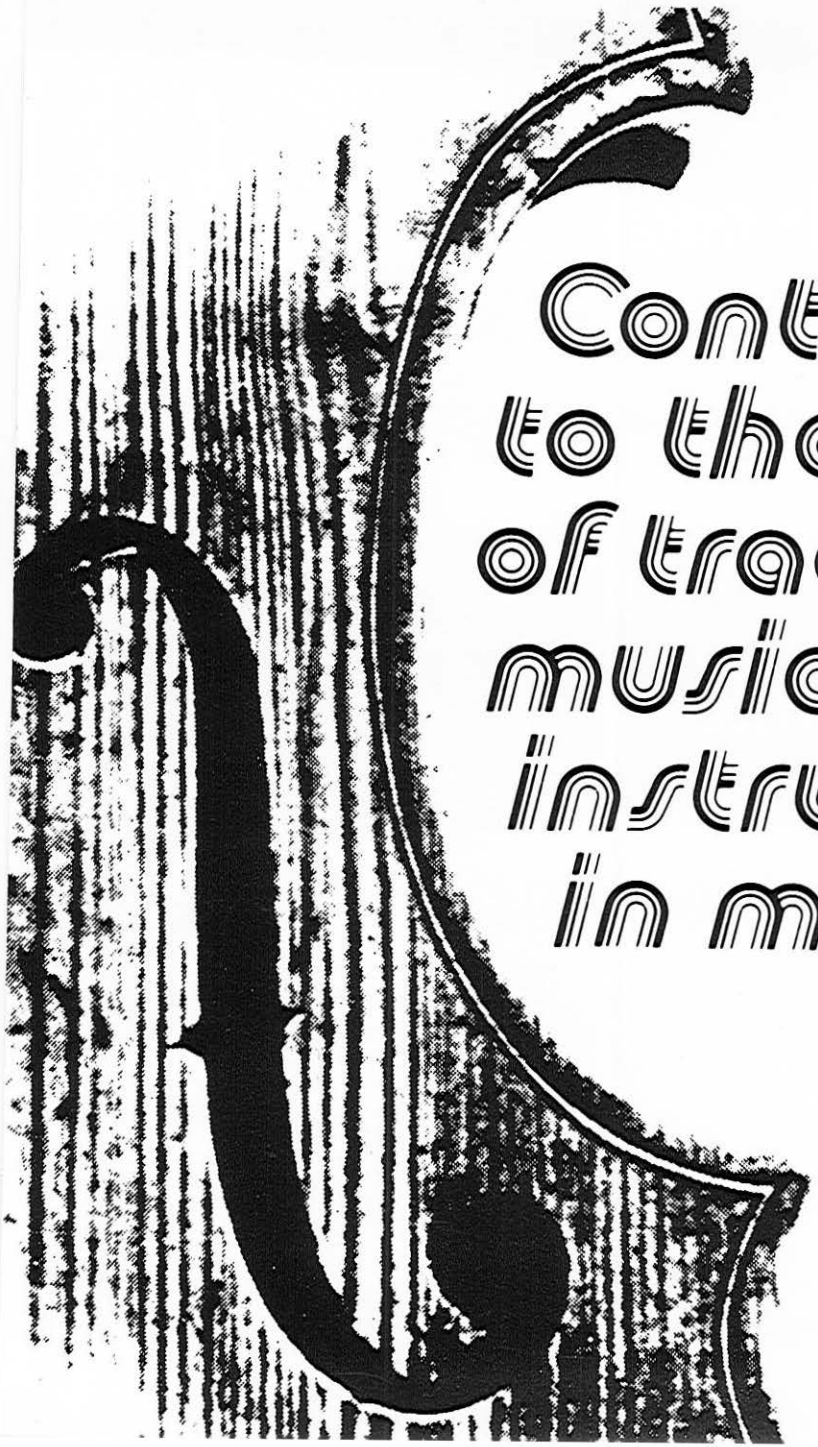


Contributions to the study of traditional musical instruments in museums

Contributions to the Study of Traditional Musical Instruments in Museums

Contributions pour les etudes des instruments des musique traditionelle dans les musées

Beiträge zum Studium der Traditionellen Musikinstrumenten in den Museen

Slovenské národné múzeum
Bratislava 1987

Contributions to the Study of Traditional Musical Instruments in Museums

Published by
the Slovak National Museum
under the Auspices of
the International Committee for Museums
and Collections of Musical Instruments of
the International Council of Museums

Editors:
Friedemann Hellwig
Pavel Kurfürst
Ivan Mačák

Bratislava 1987

Contents

Foreword

In publishing this volume we were motivated by efforts to stimulate an exchange of opinion on documentation of and work with traditional musical instruments in museums. It is an activity with multiple meanings. One of these is the preparation and processing of input data for ethno-organological research. Collections in museums often represented the basic prerequisites for this work. So far, howerer, the quality of their documentation has been considered as just a necessary aspect of the research. Such questions as how the instruments came into the collection, from whom (from a manufacturer, a musician, a dealer, etc.), from what environment, what was done with them in the museum — whether conservation, restoration or demonstrations in various forms of popularization did not alter their original characteristics, etc. —, have not received much attention. The era of this kind of work is, however, coming slowly to an end. The demands of researchers grow, and answers are being required not only to these, but also to many other questions. Museum employees are as a rule unable to answer these questions because they never asked them themselves. It is possible to argue that such work does not fall within their competence. However, let us consider what could be the result of such an argument. If museums, particularly specialized museums relinquish the task to build up the source base of ethnoorganological research they would deaden the whole activity deriving from this task. Exhibitions of instruments, lectures, talks, publications and many other activities cannot exist without contact with living scientific thinking. This then means that documentation must adapt itself to the demands formulated by contemporary scientific practice. And not only that. In view of the acceleration of demands in the research of traditional musical istruments in recent years museums should take the initiative into their own hands. They should predict which data or characteristics of the original environment should be concentrated in museums so that the evidential value of the instruments grows and their understanding approaches a holistic examination as much as possible.

In defending the links between work in documentation and research, we do not want to circumvent the fact that there exist also other important tasks in working with instruments in the museum. That is why we have divided the contributions to this volume — besides the rather extensive introductory study — into three thematic areas: (1) attribution of instruments and other accompanying data for the collection, (2) their preservation and processing, and finally (3) display, scientific and popularization-oriented presentation of the collections to the public. The aim of the contributions is not to pronounce authoritative opinions, but to call attention to the less known, or less elaborated problems of documentation and thus provoke, directly or indirectly, stimuli for further discussion.

The first problem area opens up the possibilities for a discussion about a broad range of activities associated with both the preparation and realization of research and documentation of ethnic musical instruments in the field, and ends — figuratively speaking — with their transfer into the collections of a museum. So far, this activity has been mostly limited to several routine tasks, and frankly speaking we still do not know exactly all the things that could become an object of our study and that we should record before we exclude the instrument from the context of its original function. The first work task could thus be to define these areas and simultaneously to suggest what could be expected of them with regard to ethnoorganological research.

A thematic delimitation of the areas of research is organically interconnected with a description of the methods of their documentation. Some of the data important for a research of instruments cannot be described directly, since we cannot see them. They are hidden in the structures of cultural processes, in the characteristics of individual personalities, etc. We are aware of their existence but, as G. Bachelard expressed it with regard to research in natural sciences, we can study them only in connection with a method which will allow for their isolation from the complex relationships of natural existence. Since the preparation and processing of data plays a key role in the later phases of research, we could consider in advance also the methods how to obtain and record these data.

The second problem area concerns the storage, conservation, administration and recording of data needed for the documentation of ethnic musical instruments, and is closely linked to the preceding activity. In the minds of museum workers, the center of attention in this broad range of problems is occupied by questions of conservation and restoration of collections. At the working session of the Comité International des Musées et Collection d'Instruments de Musique and the International Council for Traditional Music at Dolná Krupá in 1984, it was observed that the present level of this work is far from satisfactory. The participants in the session proposed that conservators of musical instruments contact those of materials of limited durability and together attempt to formulate their knowledge for nonspecialized conservators, respecting the conditions in different climatic zones.

The attempt at a complex documentation of instruments in museums leads to the necessity of recording complex data about their links with manufacturers, users, culture, etc., and creates demands for new ways of their processing and recording. Fortunately, these tasks come into maturity at a time when the possibility to apply digital computers is already available. Their application, however, will not be without difficulties. They bring about the necessity of an orientation towards objectivized research instead of the existing intuitive evaluation. Within the framework of this new orientation, increased claims are also laid on research of the acoustic characteristics of instruments, analysis of the material of which the are made, and the like.

Under the third problem area we understand, apart from questions of exhibitions, also the possibilities of various forms of presenting the ethnoorganological documentation to the public. Many of these are bound to local cultural and educational aspects, but every museum also performs activities of a more universal validity and it would be useful to join our forces in searching for an optimum solution.

We have outlined the motives of the editors with the hope that the project will not end with the publication of this volume, but that it will gain the active support of the professionals working in the documentation of ethnic musical instruments, or those who would like to help in this work. If a sufficient number of new contributions come together, we shall publish them in another volume. We believe that the proposed problem areas allow for a gradual but deliberate concentration of new thematic and methodological suggestions necessary for this work.

ROMAN BERGER, BRATISLAVA

Museum and Utopy
(An Outline to a Philosophy of Documentation)

1.1.

Why speak of documentation?

Museums have been built; their network is ever extending.

The collections are enormous; yet, their scope is ever increasing.

Catalogues are being built up; their systems are ever more precise.

So why speak of documentation?

A way is missing. Everything is here, everything seemingly functions perfectly, but no Way is leading to it. It remains outside the Ways of man.

Everything is situated as in Kafka's Castle.

The castle is inaccessible.

There is an unimaginable amount of information in the castle. But it is a Borges Library.

An echo of aetheric music can be heard here and there along the unending corridors: Hesse's „Glasperlenspiel" is being played somewhere.

As we know: it is characteristic of all human games that they are played in a limited space; they are isolated from the world of practice. Eliade would say: they take place in a „sacral space". And in a „sacral time". Naturally, contemporary man is destined to live outside these games. He lives — or vegetates — in a „profane" world. He has lost his pass or ticket into the former of the two worlds. Sesame is deaf.

From a certain point of view, the library makes the impression of being alive (of belonging into the profane world?): It is growing.

We have an „information explosion".

We even have some real fruit of this explosion: we live in the era of conquering the outer space; it seems to us that even Man's real space is expanding.

Howerer, is it not — in both cases — the growth of Ionesco's „Corpse"? Are not these the new myths, as R. Barthes would have us believe? Is it not all together both Castle and Library, their aspects and manifold faces situated in a world according to Spengler's vision? Is it not the „Untergang des Abendlandes"?

And, as far as Library is concerned: was not Husserl right, after all, when writing about the „Crisis of European science"?

And has not Fourastie been right, when speaking of the growth of ignorance? Is it not being daily confirmed by news from all over the world? Is it not confirmed by the information glut? Is it really information — or is it primarily glut?

Wiener spoke about „islands of information in the ocean of entropy". Are we not mistaking the ocean for the islands?

1.2.

The world is full of contradictions and conflicts. One of the factors of this „unbalanced state" is apparently the existing concept of Man, being and knowledge. Within its framework, the prerequisites for seemingly unlimited scientific knowledge originated. This knowledge grew to seemingly heavenly heights

and so did the conviction about the identity of scientific knowledge with knowledge as such.

Observing this breathtaking ascent, our heads and necks got stiff from looking stubbornly upwards and we have stopped seeing the „foundations". When we suddenly and unaware start to observe our own position, we find we have a stiff neck (after all, it is a neck-breaking position) and feel the tremor in the foundations ignored so far. A new picture of the world appears. A new „paradigm" appears. Will it make it possible to solve the so far unresolved (unsolvable) problems?

Today — 40 years after Oswiecim and Hiroshima — we must clearly ask: „How could it have happened?" We have to ask whether „omnipotent" science provides a sufficiently convincing answer to a simple question, namely whether it gave a method to humanity how to prevent such a fall. Are we so sure „it" would not be possible today? Can we have this certainty after 40 years of „peace" during which more people have been killed in wars than in the „world" war?

To put it differently: has the fascinating develpoment of science been oriented to solving human needs? Has it been oriented to the development of man; to his moral development?

Wiener's „islands of information in the ocean of entropy" are a metaphor characteristic of the „new paradigm". It graphically expresses the relationship between order and disorder. According to the „new science", this relationship is universal. It apparently holds also for an individual man and it apparently holds also for a society. The dialectics of entropy and negentropy is indeed universal and it represents the foundations of motion at all levels of existence. It holds also at the level of historical processes, at the level of social structures and also at the level of psychic processes.

1.3.

Marx saw the essence of the human being in its duality: one pole is given by nature, it is biological. The second is delimited by consciousness, it is spiritual — its essential factor is society. From this it follows that man is — so to speak — „on the road". Also society is „on the road". Even mankind, the human species is „on the road". What is its goal? It is the level of „moral personality". Or, differently: the goal of the road in „Man — a spiritual being". Or differently still: the goal is „homo sapiens".

This truth is pointed out by many thinkers and scientists of our time. In Europe, for example, it has been drastically expressed by H. v. Ditfurth who said that man is „halfway between a beast and an angel". In Asia, the evolutionary essence of man rooted in biology has been emphasized by Sri Aurobindo. Everybody knows that it is not an easy way. K. Dąbrowski expressed this in the title of his book: „The effort of existence". Or V. Frankl: „Homo patiens".

„Homo sapiens" is a goal — not reality.

How to approach such a goal?

And why to speak of documentation in this connection?

We speak of documentation because of our conviction that it should become a „documentation of the Way". It should be a sui generis travelogue of the human struggle to approach the essence of humanity. People have sent messages from this journey — „Flaschenpost" — „bottle mail". Should not documentation realize that its content ought to be collecting all the forms of „Mayday!" and all the forms of „Heureka!" — and get rid of the idea that its goal is only to accumulate these or those „objects" or „monuments", and to cultivate a pious relationship to them and through them to the past?

Should not documentation interpret these „Maydays!" and „Heurekas!" as important stimuli for the present (which is, after all, the truth)? Or more precisely: should not the museum change from a kind of „asylum" from the past into a „clinic" providing the energy and, in particular, the information necessary for a creative solution of topical problems? After all, we know, that topical contradictions and „urgent problems" of

the present exist. Why are they not so urgent in social sciences?

1.4.

Why is it so?

What kind of world outlook was it that gave birth to a concept of science separated from human fate — it gave fire to man, but did it protect him from fires?

What kind of world outlook was it that gave birth to a concept of art that strives to reflect labyrinths and disasters, or becomes escape, entertainment, relaxation, and only rarely reminds us that perspectives also exist?

What kind of world outlook was it that gave birth to a concept of history which still requires — as the mythical Moloch — hecatombs of victims?

To sum up: what forces, what demons have made „culture-stepmother" out of „culture-mother" and brought Man into the state of a kind of „fundamental deprivation" which forces him to produce chimeras and find refuge in fictions.

It could be said that the „classic paradigm" is at the back of all this. This paradigm originated in a specific historical situation on the basis of a clearly defined economic and social system characterized by class antagonisms.

The validity of this diagnosis (we shall come back to it later) could be even increased: we assume that the structures of class-desintegrated society potentiated and still potentiate the natural dispositions of man — „man-animal". We assume that the resistence, expansiveness and impact of the „classical paradigm" represent a feed-back function between the system of natural psychological dispositions of human individual and the social system, in which an analogously natural — at the given „animal level" — „law of the jungle" prevails.

What do we specifically mean by the term „classical paradigm"? Let us try at least telegraphically to outline several „points" in this „space".

a) First of all, it is necessary to recall the origin of the idea that Man is literally „homo sapiens"; the conceitedness of the egocentric individual exploited and abused the complimentary technical term of natural sciences for a self-definition in the contexts of social existence and culture; the „utopy of enlightened philosophers" (H. von Ditfurth) definitively collapsed in the twentieth century.

b) It was an attempt to justify the position of superiority which the natural man usurped wherever possible. Not only in his social relationships but also in those with Nature.

c) The „divide et imperal" slogan assumed a universal validity; it was in harmony with the Cartesian dichotomy „subject vs. object"; as R. Richta says, a „magicless world" of objects came into existence.

d) We can add that also the subject, Man, has lost his magic; he has shrunk down into a living pocket calculator; analysis became the dominant rational operation; its successes seemed to justify the use of the term „homo sapiens", as well as to confirm the identity of analysis and reason.

e) The world deprived of magic, and to a considerable extent anesthetized, was compatible with mechanical notions; its has been believed to be some kind of a „giant clock" which could be arbitrarily dismantled and reconstructed.

f) The world had to be open to manipulation; it became primarily a terrain for exploitation.

g) Man, from his position of a „master and owner" (R. Richta), degraded reality down to a market and goods, and Nature down to a reservoir of raw materials and energy, i. e., to „goods in spe"; the profit criterion became of primary importance.

h) Science provided the methods of plunder; it thus gained the title of the only reliable method of „learning about reality".

i) Science oriented towards „objective reality" prospered best where the reality was most accessible — at the level of sensorially accessible systems in the sphere of the macroworld of nonliving matter.

Attempts to explore the world of complex dynamic systems, particurarly in the sphere of living nature

started, of necessity, later; only the twentieth century has brought about the „biological explosion", etc.

The twentieth century has gone, indeed, beyond the limits defined by the range of human senses and human „common sense"; science entered the microworld and the megaworld.

One of the aspects of the uneven rate of development is that in the research of complex dynamic systems, conceptual frameworks and methods from the sphere of simpler and more static systems have often been applied; by this we mean a fundamental cornerstone of traditional science, namely reductionism already referred to.

These seemingly unrelated aspects of the occidental civilization have been listed in order to emphasize as clearly as possible a fact that touches directly upon our discussion: the fact that culture — if not the whole culture, then at least its significant part — has come to be the culture of a consumer society. That is to say, it has become a pseudo-culture, or — as we have already said — a „culture-stepmother". The consumption principle reduces Man to a beast. It degrades his substance. Culture loses its role of an original mechanism ensuring the evolution of Man and the society and becomes instead a driving force of involution. The stagnation in the psychological development of the individual leads, in fact, to pathological neurotic states. We believe that analogous processes can take place even at the level of social organisms.

2.1.

We speak about all this with spontaneous urgency because, as it turns out, not even a socialist society is immune à priori to maladies symptomatic of capitalism. We witness negative social phenomena despite the fact that the economic and social structures characteristic of the capitalist system have long since been done away with. We speak about „relics of the past". And simultaneously we speak about social sciences laggind behind.

Academician G. N. Fedoseyev calls attention to the unacceptable backwardness of social research; he speaks about the dangers of dogmatism in social sciences, about the sterility of abstract normative judgements, about the features and regularities of socialism, about its — so they say — automatic and logical growth; he postulates a turn toward practice and its pressing needs.

Several years ago academician P. S. Kapica expressed a radical requirement to integrate the teachings of I. P. Pavlov and S. Freud into the system of social sciences. In his opinion, it is the only way to overcome stagnation and ensure tendencies towards a „healthy society".

The necessity of a comprehensive reflection of scientific konwledge about psychology of man and its natural determinants is being emphasized ever more frequently and on all sides. However, it is necessary to stress that it does not mean a substitution of „biology" for social and class mechanisms. What we are facing are the necessary consequences of a systems approach towards reality which reveals the complexity of man and the society. It is an attempt to reflect the hierarchy of the integration levels of existence, in which the specific qualities of a level (n) result from the transformation of elements at the level (n-l); in our case, these are the consequences of the fact that social mechanisms do not generate the specific social qualities of human existence „ex nihilo", but rather transform what is given biologically — i. e., by development at a lower level of integration.

Whether we shall speak in relation to social existence about evolution or involution depends — as emphasized by P. Kapica — on several factors, the most important being the growth of mental and intellectual qualities in the population, evaluated according to a decreasing trend in the crime rate, the incidence of mental diseases and the incidence of drug abuse.

Since we do not have the necessary statistical data at our disposal, let us mention briefly only several

data from the sphere of the so called „social consciousness" (based on studies of Czechoslovak authors) which would seem to call for reticence rather than euphoria, when evaluating the situation:

— generally, the overall level of social consciousness seems to be rather low; this is reflected in the absence of „theoretical consciousness"; in the tendency to remain at the level of surface phenomena (F. Zich);

— only a negligible percentage of the population surpasses the level of verbal reasoning and reaches the stage of systems-dialectical thought (Leonovičová—Novák);

— ethical culture is said to be in decline; reductionism in this sphere is reflected by a shifting of ethical problems into the spheres of psychology and law (J. Popelová);

— the philosophical culture of the society is in decline (M. Zigo).

— the above negative phenomena at the level of „social consciousness" are apparently associated with certain negative phenomena at the level of the base;

— in the seventies, the rate of economic growth and productivity decreased in a number of socialist conutries and the living standard of some layers of the population fell;

— in this connection, the level of social satisfaction also decreased and there appeared neutralistic tendencies and scepticism — in particular among young people (G. N. Fedoseyev).

B. Suchodolski sees the causes of this state of things in the fact that contemporary man, exposed to an ever stronger pressure of civilization processes (almost autonomous, as a consequence of the scientific-technological revolution), lacks universally acceptable patterns of behavior, in particular in critical existential situations. As a result, he must permanently make decisions „on his own", without sufficient information. This in turn causes stress, insecurity, anxiety, agressivity, etc.

2.2.

In the capitalist society, it has been probably K. Lorenz who analyzed these questions in the greatest depth. Let us list at least briefly — as a sui generis „memento" — „the causes of dehumanization" in his interpretation:

a) indifference — loss of interest in one's own neighbor;

b) decline of the education of children in the family (the absence of communication rites, parents' lack of time, their insecurity: children feel that their parents are weak, servile, i. e., unable to protect them, etc.);

c) the collapse of mechanisms ensuring the continuity of culture (the liquidation of all customs and rituals);

d) absence of long term programs, permanent ties, etc.

e) young people search for new ideals and accept even inappropriate surrogates, decrease the threshold for key stimuli and make an ideal soil for the „seeds of demagogues".

In this connection, K. Lorenz says that „... a normal, intelligent young man (...) cannot but find in our culture many things that are wrong and that should be fought against (...), e. g., the competitive rat race of contemporary commercionalism".

According to modern methodology, in order to understand an arbitrary system, it is necessary to step over its limits and view it from outside. This follows from the systems theory, Gödel's theorem, as well as Russel's theory of types.

It is exactly what K. Lorenz seems to be doing, speaking about culture. He places it into relation with a whole complex of conditions for the preservation of life on Earth or of the level of existence: „The knowledge process is equally important for life, as the dynamic process of conservation and storage of energy. The loss of either of these leads inevitably to death." Lorenz constructs a model which functions as suggestively as a metaphor: „when the loss of infor-

mation goes so far that some cells in the body of a metazoon cease to feel themselves parts (...) of the organism then they return to the behavior of a single-cell animal (...), i. e., they begin to reproduce uncontrollably by splitting (...) the malignancy of a tumor is directly proportional to the immaturity of its tissue."

Let us stop a while to consider this statement. The problem of immaturity is not primarily a problem of the young generation but it is evidently a „problem of the immaturity of the parents" (naturally this is a generalization which omits exceptions that certainly exist); their impatience, insecurity and alibism (the inability to punish resulting from the fear of children's agressivity), their servility, orientation towards goals with no internal value, accompanied by a „utilitarian blindness towards basic values", etc. We know from personality psychology that egoism, selfcentredness or autism have their roots in immaturity.

This was expressed very suggestively by Leontiev: The important thing in human life is for the individual to pass from the individual level to that of ethical personality. In other words, it is necessary to transform the „Ptolemaic" — „geocentric" perspective into a „Copernician" — „heliocentric" one.

In the following, we shall assume that culture is a mechanism existing to ensure this transformation of Man. If it does not fulfill this fundamental function, it is sick. This was expressed by K. Lorenz in a metaphor suggesting that the illness of culture can be seen in connection with the existence of „malignant tumors" in the organism of the society — the „egoistical subsystems" of the society: „Human culture has a complicated and finely adapted structure which makes it possible for people to behave as members of a metaindividual system — society. The information that makes it possible can be forgotten more rapidly than the information contained in a gene — it can be suppressed in one or two generations. Individuals and groups of individuals can then behave in relation to the living system which we call „culture" in the same way as a malignant tumor behaves in (...) an individual. The mercilessness of the destruction is proportional to the loss of information."

Culture can thus be seen as a mechanism ensuring the process of maturation. Spiritual immaturity, infantile desorientation and insecurity caused by a denial of culture lead the individual astray. The immature individual, in his attempt to get rid of the stress and anxiety caused by isolation feels that „it is better to belong to even the most miserable social group than to belong nowhere (...)." „After a long deprivation (...) pigeons copulated with rags, fish viciously fought presented objects, cocks fought their own tails in an empty arena..." (K. Lorenz).

We can notice here an analogy between these considerations and the analyses by E. Fromm in which he strove to arrive at the fundamental psychological conditions for the origin of nazism. He proved that the fascist structure of personality, fascist mentality, etc., originates in a situation characterized by „meaninglessness and helplessness of the individual and the individuality". The famous psychologist has claimed „that our feelings begin to be supressed already in childhood and the real individuality is thus deformed (...). And yet, it is nowehere said that education must inevitably lead to a suppression of spontaneity if it honestly strives to support the spiritual growth of the child, his personality and internal freedom".

3.

What has this to do with problems of culture?

In our answer, we may recall the famous experiments by Prof. Zimbardo and Prof. Milgram showing a „duality" of human beings which is threatening in its implications and suggest that the expression „natural man" is still very far from the truth, that the medieval term „Man-Beast" would be more apt.

The experiments confirmed the old experience which was cynically and with extreme perfidity exploited by the planners of the Nazi dictatorship and — pars pro toto — led to Oswiecim, namely that archaic structures of the human being can, under certain circumstan-

ces, manifest themselves with unprecedented brutality. Education and erudition based on memorizing in the intentions of the classical paradigm, totally fail here: even a university-educated person with a high IQ can change in an amazingly short time into a murderer and sadist.

As I. S. Kon shows, the situation of a scientific experiment is a sufficient illustration — because of the myth of science, and in the name of prestige man resigns his self to an „anonymous authority" — he gives up the elementary postulates of humanity only to avoid isolation. He joins the executioners only to avoid the suspicion that he „does not understand higher goals". He becomes an automaton.

P. Kapica writes in his article „Education of young people towards creative work" that people's inability to use adequately their free time and affluence „is more dangerous to mankind than a global nuclear war". He shows that there are only two approaches to the solution of this problem, the first being the one described by Huxley (...): „to satisfy the primitive, animal needs of the broadest strata of the population, to teach — from early childhood — indifference to spiritual and moral problems. The second approach is exactly the opposite...". As far as education is concerned, he says: „So far, the attitude to education has had to a certain extent a utilitarian character. A man educated himself so that he would be able to effectively fulfill his economic functions."

The consequences of this concept are shown by an outstanding Soviet writer Ch. Aitmatov in a blood-freezing technocratic vision:

„But a time will come when people will control other people by means of radio, just as they now control those automata. The conditions for this already exist in science. Science achieved this, following higher interests." „Does it mean that each of us would have to carry a small radio, let us say the size of a transistor radio, to hear the commands?" „No one will have to carry anything. You could be even naked. It will be only invisible radio waves, the so called biocurrents which will be influencing your consciousness at all times. Where would you hide?" „You think that you live and act — act independently, according to your own free will, but in fact you will be controlled by instructions from above. According to a strict program. It is necessary that you dance — a signal will buzz, and you will dance (...), work, (...) make love to your wife." (...) Suddenly Edigey began to be afraid (...) „And what if such people really exist and, moreover, what if they are great scientists who long to control us all as gods?"

Let us add to the quotation: science rooted in the „classical paradigm" reached, in the context of omnipotent technological processes oriented at „mastering Nature", the stage of mythologization. The systems approach to science, as stressed by Sadovskij, should fulfill, among other things, also the function of a self-critical reflection of science. It appears that also here we encounter a process which resembles the growth of a malignant tumor. It is the evident insufficiency of the real links between science and the metasystem of real, acute, global needs of mankind.

In this context, the matter-of-fact words of academician G. N. Fedoseyev about the inevitability of forming the „new man" acquire a pathetic accent: „The task is to subject the whole system of education (emphasis is mine) not simply to an accumulation of a particular sum of knowledge but rather to a universal education of man."

4.1.

To consider radically the „problem of documentation" we must still pass through extensive considerations of a general character. It is, however, high time to ask what, specifically, this problem really is. Or, to put it more precisely: what it appears to be to me, as an external observer.

From the point of view which I will attempt to define, it appears that documentation suffers from the malady of classical musicology and musicology suffers from the malady of classical science. It is, so to speak, a „typical representative" of the retarded state of

social sciences. The retardation lies not in the fact that the methods of social sciences are not „exact" enough, that not everything can be quantified and measured; the retardation lies not in the fact that so far it is still a long distance from the museum to the computer center. The problem lies in that musicology (and organology, with its documentation) have not registered conceptual changes — fundamental and radical — that occurred as a consequence of the advent of „nonclassical science". Still, even their failure to register these changes would not be so bad. What is really painful is the fact that musicology (organology and its documentation) is not „realistic" — it does not know how to deal with the complexities of the world.

As a consequence of the isolation from the present world and of a kind of deliberate fetishization of the past (the thesis: „musicology is a historical discipline" served as an alibi) — musicology (in particular its core, the so-called theory of music) was not able — paradoxially but necessarily — to deal theoretically with the facts presented by historical processes. „Sine ira et studio", with the exception of a small number of subdisciplines (such as e.g. ethnomusicology), the science of music so far has not reached the level of science in the modern sense of the word. Paraphrasing A. N. Luriya, we could say that musicology is still in its prescientific stage, similarly as classical psychology was fifty years ago.

4.2.

Speaking telegraphically: the outlook of classic musicology — eo ipso the outlook of organology — eo ipso the principles of documentation — are marked by: an objectivistic detachment (in spite of Heisenberg), a microscopic analysis (in spite of Bertalanffy), a static structuralism (in spite of Piaget), an absence of the problems of control (in spite of Wiener) and a reductionism resulting from these and other maladies (in spite of A. Koestler).

I began to speak about the problems of documentation because I am not a specialist myself. I have had no inhibitions that would prevent me from „overstepping the limits of the system" and have been thus led to the conviction that (again telegraphically speaking) e v e r y t h i n g m u s t b e t u r n e d u p s i d e d o w n!

Buf first, it is necessary to ask: If a miracle occurred and musicology — organology — documentation decided to register and investigate complex dynamic systems on the basis of theories, themselves based on reliable solutions of ontological and noetic questions, would everything be all right then?

My arrogant answer is negative: NO! Even then things would not be right.

This means that my considerations have rather immodest ambitions — to see documentation as a part of problems relating to culture and existence of Man.

So far, however, we want nothing more than to see „. . . with a naive simplicity — as small children — first the general features . . ." (J. Piaget) and, then, the general similarities and relationships as „. . . a tourist who is reminded of Pittsburgh during a sightseeing tour of Bangkok" (G. Weinberg). The same advice has been given to the adepts of science by H. Selye: „to capture by a fresh, unschooled eye, freed from prejudice, the principal outlines of large problems."

A small digression.

I am not all that sure that at my age (55) my eyes are still as fresh as Selye would want. It is, however, certain that they are — from a scientific point of view — unschooled. I am a practicing musician. When I was younger, I taught the piano and now I work primarily as a composer. My philosophy could be briefly expressed as follows: Composing music is a special case of „composing the world", it is a sui generis m o d e l of an integration of the world.

4.3.

Without troubling myself with the question whether it will be an expression of a creative force, or of inertia, I would like to outline now a model, to make

a „blind leap" (from Bangkok to Pittsburgh) with the hope of a fool to contribute to the composition of the atomized world.

G. Weinberg: „Every serious scientist leans on analogies; the important thing is not to stick to the analogy, but to transform it at a proper moment into an exact model."

The model I would like to outline is based on personality psychology and on an intuitive premise that there exists an analogy between „rough outlines" of social and psychological processes. This intuition seems to gain support nowadays in the neoclassic thermodynamics, according to which the society is an organism sui generis (I. Prigogine).

I shall attempt to show that both systems reflect generally valid regularities.

4.4.

The basic common aspect here is the organization, understood dynamically. The differences among the types of organization in connection with the complexity of the system were discussed by Ashby who pointed out that the more extensive the system, the looser are its ties: „For example, in a herd of cattle the ties between the individual animals are looser than the ties between an animal and its parts (e.g. the four extremities). Its four extremities, however, are never as closely linked as the molecules inside each bone". In other words: already at the level of a human organism we encounter an unimaginable complexity (the complexity of a single cell is not accessible to human imagination); the relatively perfect organization of human organism cannot be mechanically extrapolated to a society. In a more complex system we cannot expect an equally perfect organization of a kind that probably exists in a simpler system. S. Lem writes in this connection: „You mixed up two completely different matters, considering the degree of complexity and the degree of perfection as two inseparable characteristics. You consider an alga as more simple — and therefore more primitive — and therefore of a lower order than an eagle. Nevertheless, the alga incorporates into the system of its body the photons of the Sun, it directly transforms the cosmic energy into life (...), it lives off a star, and what is an eagle living off? Mice, as their parasite...".

The fact that we cannot postulate as perfect an organization in a society as in a less complex system does not, however, imply that we could not, in a mental experiment, attempt to confront entities existing on different levels of complexity and consider the possibilities of solving the problems outlined above.

That is to say, in both cases we are dealing with an organization.

In both cases we are dealing with the problem of regulation.

The common basis is offered by cybernetics.

5.1.

The model

Let us briefly recall the aspects of the problem: dehumanization phenomena occur; it is a process comparable to the development of a „malignant tumor"; the internal ties of the society — organism — are being gradually eroded; in the words of the author of General systems theory a „progressive segregation" occurs, resulting in a primitivization of the original traditional structures — the topmost levels of integration apparently disappear; disintegration sets in.

Let us look at this situation from the perspective of the Theory of positive disintegration made famous by the recently deceased doyen of Polish psychologist K. Dąbrowski. Starting from the evolutionary conception of Man, he arrived at the opinion that the original regulation, acquired by the individual in childhood, ceases to suffice at a certain stage of development. The growing complexity of existence exceeds the „regulator capacity". „Primary integration" comes into a conflict with the demands of life processes. „Positive disintegration" occurs; it is not yet an illness, it is not yet neurosis (rather its opposite: a weak psychological structure will adapt without a conflict).

Disintegration is „positive" because it is a prerequisite of development toward a higher level of intelligence. The road to „secondary integration" requires mastering more general concepts, more truthful criteria, but especially new activities, new habits. Consciousness attains a qualitatively new position: it is to pass from the capacity of evidence to that of controlling the psychological apparatus, including mental processes.

Dąbrowski emphasizes at this point the key significance of previous experience in the sphere of attention focusing techniques. „Secondary integration" represents a conscious overcoming of egocentrism, egotism, utilitarianism and hedonism; it abolishes the segregation of man from his environment; in contrast with the animal tendency „to demand, to want, to accumulate", it offers the possibility „to be". We can anticipate the origin of the foundations of „cosmization of consciousness". This, howerer, does not mean passivity. As R. Thagore says: „To give is our supreme joy and liberation, because it is only through giving and to the extent of it that we are united with the Infinity." In this perspective, consciousness becomes more realistic, it becomes the „consciousness of what is". There always exist some imperfections, some randomness. We could say that consciousness is the „consciousness of the needs of the environment". And the consciousness of our own possibilities. And of the duties resulting from this confrontation (an animal, on the other hand, simply runs away).

Some such situation in the mental development of man represents, in our opinion, a model of the actual situation in the society. Let us hypothetically assume that the unrestrained development, on the one hand, and a stagnation on the other, can result in a state of „positive disintegration", or — in borderline cases — in a kind of „neurosis".

5.2.

Let us now try to delimit and define the system „psyche" (which we have, so far, avoided), then the system „social existence", and confront both systems so as to throw light on the problem of regulation.

In the sense of General systems theory a system is defined by determining a) its elements, b) the relations (links, paths, etc.) between the elements.

From the system „psyche", we shall isolate „consciousness". Traditional psychology had the tendency to identify consciousness with reason, thought, particularly with memory. From the perspective of scientific psychology, consciousness is a metapsychological function (nothing important is known about its structure), incomparable with other psychological functions. That is why we shall denote by „psychological functions" the whole complex of phenomena, except for consciousness. On this basis we shall build the opposition „psychological functions" vs. „consciousness", as significant for the whole system.

For definition purposes, „psychological functions" and „consciousness" form together the set of the system elements.

Among the relations which can be considered between these elements, we are interested in those which are relevant to the regulation processes. We shall distinguish two such relations: that expressing the dominance of „consciousness" and that expressing the dominance of „psychological functions". The nature of these relations follows from the nature of the two subsystems:

— the fundamental role of the complex subsystem „psychological functions" consists in adaptive processes; the plurality of these processes generates the overall divergence and the growth of variety; this implies the relation (tendency) of „disintegration"; i. e. in case that psychological functions dominate, the whole system becomes chaotic, „positive disintegration" occurs;

— the fundamental role of the complex subsystem „consciousness" consists in cognitive processes; the opposite tendency is characteristic, namely finding of similarities, pattern recognition (let us note, for example, the thesis of K. Lorenz on the „ratiomorphous" character of intuition, etc.); we deal with integration.

5.3.

The hypothesis about the analogies between psychological processes and social existence is justified, in our view, by the assumption that there exist analogies between the above described functions of the individual organism and the functions of the social organism. In both cases we encounter processes of adaptation and of cognition.

Social existence also has two subsystems. The first, oriented primarily to adaptive processes, i. e. biological survival, will be denoted by the term „civilization processes". The second, oriented primarily to cognitive processes, i. e. spiritual survival (mental evolution) will be denoted by the term „culture" (in both cases we assume that the subsystems include above all a system of activities).

5.4.

On the basis of the above analogies, we shall represent:

the subsystem „psychological functions" by the subsystem „civilization processes"

the subsystem „consciousness" by the subsystem „culture".

The relations resulting from this formulation can be expressed by an equivalence relationship:

„psychological functions" vs. „consciousness" = „civilization" vs. „culture".

We assume that „culture", similarly as „consciousness" has a tendency towards integration and vice versa — „psychological functions", similarly as „civilization processes" have a tendency towards disintegration.

5.5

The complex entity „psyche" functions correctly when „consciousness" fulfills the role of a regulator in relation to „psychological functions".

By analogy — the complex entity „social existence" functions correctly when „culture" fulfills the role of a regulator in relation to „civilization processes".

Regulation plays a key role.

6.1.

The question of what „regulation" really means is answered by R. Ashby as follows: „First of all we have a set of disturbing influences D which originate in the world in which the organism lives (...); when the regulator R does not function, a danger arises that the values of the significant variables E will exceed the acceptable bounds (...) of the subset of acceptable values $/\rho/$ (...). When R is a good regulator, then it transforms the disturbing influence D, so that they all fall within the subset $/\rho/$". On another occasion, Ashby said that a good regulator „blocks the flow of variety directed from the set of disturbing influences toward the significant variables".

What is the effect of these remarks on the concepts we have already defined?

Under the set of disturbing influences D in the system S_1, we shall understand stimuli originating in the environment and reflected in the automatic reactions of the subsystem of „psychological functions"; „consciousness" will be represented in the position of the regulator R.

Under the set of disturbing influences D in the system S_2 we shall understand the uncontrolled expansive movement of „civilization processes"; culture will be represented in the position of the regulator.

6.2.

Under „significant variables" we shall understand in both systems the structures which make it possible to preserve (a) the identity, as well as (b) the evolution of the system (resulting from the specificity of the human being and from the latent capacities for mental evolution) toward a higher level.

The question of identity is considered by Ashby in connection with survival. He presents the example

of a cat and a mouse: „When a mouse reaches a state in which it is quartered into four independent pieces, or when it loses its head, or when it becomes a solution of aminoacids in the blood of a cat, then (...) the transition into one of these states does not correspond with the concept of „survival".

In the case of a human individual the danger of losing one's identity occurs when his psychological integrity is eroded and only partial reactions remain (as if they „devoured" the activity of consciousness). Apart from the extreme cases of psychotic diseases, this includes also the cases mentioned in connection with the experiments of Professor Zimbardo and Milgram, or with the prose of Ch. Aitmatov, when consciousness loses its regulatory competence and is replaced by a bell regulator.

In the case of the system „social existence", „positive disintegration" occurs when there is a chance that „culture" will once again achieve regulatory competence (that it has not yet been transformed into a „solution in the blood of civilization").

6.3.

Apparently, there exist examples of catastrophes in which irreversible processes, such as loss of identity, disindividualization, or even destruction comparable to psychosis, occurred. Despite this, we do not intend to cry „destroy civilization!" It would be naive. However, it would be equally naive to bury our heads in the sand. There are too many warning voices around. Several quotations should confirm this:

J. Y. Cousteau and Y. Paccalet:

„I cannot get rid of the thought that the evil AJUJEMA — the ominous demon of swamps has definitively won. Simplicity, the harmony with the environment, magic — nothing saved the nomads of the sea. They perished. And I am particularly depressed by the knowledge by what other name to call AJUJEMA. Western civilization."

V. Zikmund:

„A special kind of emotion, very closely associated with physiological functions, whose considerable expansion and growth is often considered in connection with the development of civilization and modern technology, is anxiety (...) An excessive influx of civilization stimuli (...) may also be seen as one of the obstacles in the further development of human society." The author goes on to say that there occurs „a kind of superthreshold inhibition", man becomes „dull", „indifferent", his „vigilance" decreases. „The cortex, as well as the subcortex structures are (...) inefficient; their scattered, random excitation causes the information coming into the brain to be lost in a kind of noise..."

W. Heisenberg:

„... scientific and technological activity will result in a collapse of the old culture, it will be associated with a reckless and barbarian attitude, it will turn out to be something which disturbs the frail balance characteristic of every human experience of happiness. Unfortunately, these consequences cannot be avoided anymore (...). People have not had control over the process of development for a long time now..."

6.4.

Let us aks: what are the prerequisites for the return of harmony?

We should, however, first realize what is at stake in such a return.

„The chief difference between the man of the archaic and traditional societies and man of modern societies with their strong imprint of Judeo-Christianity lies in the fact that the former felt himself indissolubly connected with the Cosmos and the cosmic rhythms, whereas the latter insists that he is connected only with History" (M. Eliade). The traces of „cosmic consciousness" can be found still in the medieval era — as follows, for example, from the analysis by Gurevich.

What are then the possibilities for the return of the „lost paradise"?

A return sensu stricto is impossible to realize, since

the harmony of the past had been the equivalent of „primary integration". The existence was an unstructured totality in which „culture" and „civilizations" were synonyms. Until the schism. The chance lies only in the establishment of adequate communication.

7.1.

Let us lean once again on cybernetics. Its laws hold true in the real world. Our problem is associated with the law of „unavoidable variety". This law answers the question of the relationship between „culture" and „civilization" from the information point of view. R. Ashby formulates it in its briefest form a follows: „Only variety can destroy variety." More specifically: „. . . when the variety of results is to be limited to some fraction of the variety of moves of player D, the variety of the moves of player R has to increase at least up to an appropriate minimum."

We encounter here familiar terms, although they have undergone a mutation in the meantime: the „set of disturbing influences D" became „player D", and the original „regulator R" became „player R". By this, Ashby refers to the dynamic (it is a „game") and competitive (it is in fact a struggle, a fight) nature of regulation.

7.2.

How should it look in the case of „culture"? How to expand its information capacity?

Let us ask ourselves: Where had civilization taken its nature from? How did the information deficit in culture and the information explosion in civilization occur?

The questions are apparently trivial and the answer is necessarily banal: classical science!

„The principal source of knowledge" became, in the context of civilization processes, „the principal bag of tricks" for as perfect and reckless a plundering of nature, man and humanity, as possible. Only those who had not let themselves be confused by the speeches about the ideological and ethical indifference of science, saved the situation. Recently, this has been very clearly expressed by M. Eigen and R. Winkler: „. . . as soon as we start to apply our knowledge, we cease to exist outside good and evil."

Let us return to the fundamental qeustion:

How to enrich the variety of culture? How to help the collapsed regulator back to its feet? Could not civilization serve as an example in this? Could we not learn from our „enemy" and try to find a way how to get hold of its engine that attained such high revolutions in its case?

7.3.

Coming back to cybernetics, it turns out that we must proceed from the law of unavoidable variety, to problems of amplifiers.

R. Ashby: „A regulator can be selected (. . .) only in two ways: (1) it survives in some process of natural selection, or (2) it is designed (. . .) by another regulator. (. . .) When regulation is being attained in stages — when the function of R_1 is to create R_2, the capacity of R_2 is not bound by the capacity of R_1 (. . .). In this way regulation is amplified." A very important remark: „the operation of an amplifier (. . .) utilizes additional devices. The amplifier has some source (. . .), the input contributes very little, or not at all . . ."

A specific example of a crane operator: „His whole work consists in manipulating the electrical (. . .) control device."

Let us reformulate the last question: is „culture" in a position to play at least the role of an „input" that contributes very little, or not at all?

Is it not tempting — to leap from a state of impotence, into a state of amplifying chains?

We are looking for the „output source". Could it not be (despite everything) science? Even in those contexts in which it has so hopelessly entangled itself? There, that is to say, exists also another possibility of output amplification, namely „supplementing

(...) from random sources and from the environment itself", i. e. from the system of civilization processes.

Let us attempt once more to outline the contexts of „culture" and „civilization", admittedly distorsting the complexity of the system synchrony because of the linearity of our outline, but on the other hand, reflecting its principal feature, namely processuality.

Though not expressis verbis, we shall, nevertheless, speak of documentation as of a dynamic system in a macroscopic perspective.

8.1.

In what we have said, by means of the „model" or directly about culture, we want to underline still another latently present and perhaps decisive moment. Dąbrowski's „secondary integration" and particularly Leontiev's „Copernician perspective" of a mature personality necessarily implies the possibility of an unlimited expansion of the horizon of consciousness: „Reality begins to appear in front of him (...), far outside the bounds of his practical world" (Leontiev writes: „Personality is in fact created twice"). When we correlate this (pars pro toto) with the views of Eliade and Gurevich regarding the unity of man and existence, we can formulate a hypothesis, that both for „consciousness" (at the stage of „secondary integration") and for „culture" (when it fulfills its regulatory functions), there exists a factor which we shall call „cosmic perspective" and which cannot be reduced only to the problem of the physiology of biorythm systems.

We shall come back to the definition of the aspects of „cosmic perspective". Preliminarily, we want to quote an idea of Marx's that seems to us to be of a key importance: „Man (...) approaches himself as a present, living gender, by seeing himself as a universal, and therefore free being". „The universality of man is practically reflected in the very universality which makes the whole nature the non-organic body of man". „Nature is his body with which he has to remain in a continuous process in order not to die. That physical and spiritual life of man is connected with nature simply means that nature is connected with itself, since man is a part of nature."

8.2.

We assume that „culture" is a dynamic system which, in a historical process, transcends „rational transformations" (according to Piaget „rational transformation" is a one that „does not change everything" in a dynamic system). We could also use the term „region of stability" (in the sense defined by R. Ashby) and say that the dynamic system „culture" preserves its identity thanks to a „region of stability", i. e. thanks to the subsystem „tradition".

We assume that „tradition" has a hierarchical structure and that its summit is formed by „cosmic perspective" with a certain minimum of creative forces — „creativity". The correlates in the system „psyche" would be „cosmic consciousness" and creative components of subconsciousness at the archaic level of the brain. These components of the traditional core („cosmic perspective" and „creativity") are interrelated. When the core of the „region of stability" succumbs to destruction (when the „cosmic perspective" disappears and „creativity" is catapulted from the dialectical relationship with it and finds itself at the level of the finite world) culture loses its identity and substance. Without a „region of stability" „culture" loses the competence to function as a regulator of social existence.

We, however, assume that in a situation of „positive disintegration", only a partial destruction occurs in the sphere of culture (only the higher levels of integration of the hierarchical whole disappear) and the rest which remains in the form of „individual memories", individual or group culture components, will be denoted as „relict culture".

We assume that under certain circumstances „relict culture" could fulfill the function of the „initial amplifier" (R_1) in the process of gradual amplification

oriented to the reconstruction of „cosmic perspective" and the renaissance of culture.

8.3.

We have said that the disintegration of „culture" was caused in principle by the classical paradigm — classical science linked to a bourgeois social structure and mentality. It contributed to the creation of a partition, a filter, (stereotypes, conventions, contemporary myths) that hermetically separated the world of entrepreneurship, exploitation and business, from existence, the universe, the „cosmic perspective". This filter appears to be very resistant, since it suits the mentality of the „natural individual". It is in harmony with sensorial perception and with the so-called „common sense" and its interests. A world reduced to a macroworld is a world „close at hand". Everything else is a superfluous burden. Classical science became — willy-nilly — an apology for the „natural individual" and his animal ambitions. It elevated the reduced world and the reduced man to a standard. „Private ownership had made such fools and dunces out of us that an object becomes o u r object only when we h a v e it (italics by R. B.), i. e. when it exists for us as a capital, or when we directly own it, eat it, drink it, wear it (...) simply, when we directly use it. (...) All the physical and mental faculties were replaced by alienation (...), ‚a faculty to have'. To such an absolute poverty had the human being to be reduced..." (K. Marx).

Under these circumstances, the birth of non-classical science and particularly its implications for human existence, went almost unnoticed.

„Often, it has not been (...) appreciated enough that it was in fact a qualitative change. (...) Radical change in individual sciences (...) affected and still affects the overall picture of the world. (...) Going beyond the common experience, common opinion, common sense („rationalism") has produced a new type of experience, „realism". These radical qualitative changes in the picture of the world provoked in many cases „furious resistance" (M. Zigo).

It is the assertion of reason in the historical process: „...the function of reason (...), of thought not reducible to reasoning — was the transition from the static schema of existence to a kinetic one, and from the kinetic schema to a dynamic one... (...) The immediately given concreteness (...) is unstructured. The way of reason is a transition to an ever more complex structure as the object of thought. (...) Megascience treats both metagalaxy and microworld within a framework of unitary conceptions and its object is existence as a whole" (Kuznecov 1974).

The nonclassical science is here.

8.4.

It is here with its ambition to reflect the universe, with its tendency to integrate. It shows not only the infinity of space and time but also the complexities of organization with the „curved space" and „reversibility of time" and with the opinion that the obstacles to learning are „the senses and ratio" (Inyushin).

The nonclassical science once again discovers the „cosmic perspective" for man. A chance arises for the regeneration of the lost central pillar of „culture". An opportunity arises for the „reduced man" to rise up again from that „absolute poverty" into which he was imprisoned by the absolutized „faculty to have" and its accompanying symptom — the loss of the „faculty to be".

If the nonclassical science is to help regenerate the „cosmic perspective", it must first be repatriated from the sphere of „civilization processes" into the sphere of culture. In this context there arise the possibilities for the origin of a coalition between „nonclassical science" and the „nonclassical art".

The theory of art is confronted with the demanding task to reinterpret the discoveries, the substance and the meaning of nonclassical — the so called „new" art. We believe that its artifacts, in their authentic form, anticipated, or commented upon, through sensorially perceivable metaphors, the levels of reality inaccessible to senses themselves.

8.5.

Following up on the motif of „progressive amplification", we shall formulate the hypothesis that both the nonclassical science and nonclassical art form elements of a chain of amplifiers whose initial element is the „relict culture". A possibility arises to construct the following structure: „relict culture" → „nonclassical science" → „nonclassical art"; at the output of the pertinent transformation process, it is possible to expect the „cosmic perspective" („actualized" in a manner of speaking) in the form of a suggestive (artistic form) and intellectually binding (scientific content) information.

R_2 (the scientific mode of the „cosmic perspective") and

R_3 (the artistic mode of the „cosmic perspective") could play the role of the „output source". The above complex can be viewed as a „first order amplification" of a kind.

„Second order" amplification would consist in the incorporation of the archaic and primitive structures:

R_4 „nonclassical reflections" (oriental philosophy, the rational core of mysticism, the rational core of religious systems, the rational core of ancient mythology, etc.), and

R^5 the folk experience (Let us remember here that the „classical paradigm" originated in towns; knowledge based on a contact and on creative symbiosis with nature, on a practice of life based on the authentic experience of an infinite series of generations, was questioned, scorned and eliminated by means of a variety of „inquisitions" by the bourgeois).

8.6.

The resulting „integrated information" R_6 is the goal of the „second-order amplification".

However, it is not the ultimate goal. This we see in the introduction of R_6 — as a kind of quintessence of the „theory of evolutional life" — into the educational processes (in the broadest sense). The last transformation whose content is given by the last bigram ($R_6 \rightarrow R_7$) of the trajectory ($R_1 — R_2 — \ldots — R_7$) transforms the „integrated information" into a qualitatively new process: into „wisdom". Into an essential information integrating knowledge with practice.

We have asked the question: How to enrich the variety of „culture" so that it can — according to the law of unavoidable variety — renew its regulatory functions in social existence? In the language of our model we have asked: Is it possible to overcome „positive disintegration" and reach the level of „secondary integration"? We have reached the hypothesis that it is, indeed, possible. In a macrosystem of „amplifiers" influencing each other on the principle of positive feedback, information of a new type can originate on a qualitatively higher level than the information born on the „dry trees" of the bourgeois anti-paradise. Tre great poet O. Mandelshtam expressed this in a farseeing metaphor: „Hell is surrounded by Florence."

There is just one goal: wisdom in life. That means wisdom in practice.

„Wisdom per se" has no meaning.
Meaningfulness is a functional of real contexts.
The important thing is the principle of life.
The important thing is negentropy.
Cosmos.
Cosmos is cosmogenesis.
Cosmogenesis occurs under conditions of chaos.

Negentropy — in the sense of non—classical science — originates in a state of „superfluous entropy".

That is why:

„Not everything is lost yet,
You can still sing, you can still laugh, Man,
And watch the war movies;
You can still sing, you can still laugh, Man,
And remember all the wars;
You can still sing, you can still laugh, Man,
Not everything is lost yet!" (J. B. Isotamm)

9.1.

The outline of the „structure of gradual amplification" in the system „culture" has two functions:

a) It should answer the question whether it is possible to attain „secondary integration" in social existence; it is a hypothesis concerning the possibility of a regeneration of „culture-regulator" in a situation in which the civilization processes have emancipated themselves and uncontrollably dominate social existence.

b) It is an outline of the situation of documentation. It answers the unspoken qeustion of the meaning of documentation.

Here our outline has to be supplemented:

We can denote the „structure of amplifiers" by the term „culture in statu nascendi" (CISN). We have to add that the „structure of amplifiers" is the structure of the system and documentation is then the memory subsystem, i. e. a subsystem of CISN (It would be mechanistical to see this as a degradation of documentation. The dialectics of systems shows that memory (documentation) as an abstract static system is of a negligible importance in comparison with memory as a dynamic organ in the organism of dynamically understood culture with a memory, situated in the epicenter of the existential field).

The first consequence of a structure conceived in this way (a primary consequence from our point of view) is the contact of documentation with the whole of CISN, with the dynamic whole „submerged" in contemporary social existence. Within this framework, documentation should take a part in solving the actual pressing problems. It is, therefore, a contact of documentation with the actual social existence, with something that exists „here and now".

The complementary consequence is the contact of memory — including documentation — not only with the traditionally (autonomously) understood science, reduced to a specifically oriented discipline (organology as a subsystem of musicology, in principle still a „classical science", or, as T. S. Kuhn puts it, „normal science") but, through CISN, with the actual state of knowledge formation represented by „nonclassical science", the accompanying metascientific discipline and general methodology.

9.2.

In these relationships we should look for the meaning of documentation if we are to step outside the vicious circle of the traditional paradigm.

This meaning could be hypothetically defined as follows:

a) „Nonclassical documentation" is oriented towards an active, creative and methodically adequate participation in the negentropic macroprocess of „culture in statu nascendi".

b) The object of interest of nonclassical documentation is via facti, culture itself, treated as a system — or one or more of its subsystems.

c) Culture — because of its complexity — apparently belongs into the category of „large-scale systems" in the sense of cybernetics; we emphasize this in view of the far-reaching methodological consequences.

In the case of ethnomusicology in general, and of organology in particular, this implies the necessity to start from a conception of culture defined both theoretically and philosophically.

9.3.

If we telegraphically review the cultural research made so far — from evolutionism and diffusionism, through the influences of Durkheim's sociology (with the category of a nonreducible „social fact"), the influence of psychoanalysis, to Malinowski's functionalism, Claude Levy-Strauss's structuralism and semiotic tendencies from P. Bogatyriev to J. Lotman — we find that everywhere we encounter culture understood globally as a social „modus vivendi", as a form of human behavior.

To get at the heart of the matter, let us consider functionalism. R. Malinowski stated that the function

of individual elements of a culture is not only to preserve the structures and continuities of the cultural system, but also the fulfillment of human needs. He formulated a theory of needs, composed of three categories: the first consisted of „basic needs" (the consequences of man being a biological being), the second of „derived needs" (man as a social being), the third of „integrative needs". While the first and the second categories have been elaborated in detail, the third — connected, moreover, with the „specific cultural aspect of human existence", has been defined only generally. R. Malinowski only stated in this connection that „among the reactions to these needs are knowledge, religion, magic, ethics, morality and art" (A. K. Paluch).

It is almost symptomatic: the „specifically cultural" aspects are almost left aside in a conception of culture elaborated in detail. And our problem is not solved even by one of the newest conceptions in the sphere of semiotics. Its foremost representatives write, for example: „Under culture we understand the memory of a society." „. . . it is a problem of a system of semiotic rules according to which the experience of mankind was transformed into culture." In an open world of the reality there originates a „limited world of names": that is to say, culture transforms facts into signs, individual experience into a text available to a group, a society, etc. (J. Lotman, B. Uspensky).

9.4.

Once more: even if we leave aside the motives that led P. Bogatyriev and R. Jakobson to the joint statement that we still encountered in research the „smuggled-in-dead weight" of the philosophy of the nineteenth century, we still have to be aware of the fact that under culture people understand either an empirically evidenced modus vivendi of a society or man, or an „abstract system of rules" (as in the case of the above quoted semioticians). In both cases we deal with reductionism.

In the first case, all the horizons of being are reduced to a single one, namely the social horizon. Immediately the questions offer themselves: Is everything connected with man as a „social being" „culture"? Is it true also for the artifacts of totalitarian societies? Let us put it bluntly: is Oswiecim also an „element of culture" — „culture sui generis"?

J. Lotman and B. Uspensky (the second case) at least suggest a negative answer to this absurd question, forming the contradiction of „culture" and „non-culture". Yet the answer is much clearer in authors who are not directly concerned with culture — as we have seen in the statements by K. Lorenz, E. Fromm, Milgram, Zimbrado or Aitmatov. This encourages us to bring the problem to a head and have a try at its solution.

9.5.

When we have assumed in our „model" a homology between the relationship „consciousness: psychological functions" and the relationship „culture: civilization processes", we have outlined only an abstract scheme. Now we want to be more specific. We want to isolate the factors in culture which correspond with the lability of consciousness resulting from the mechanisms of evolution.

H. von Ditfurth states that in psyche above which consciousness emerges here and there, a „hierarchy from down" holds; the psychological functions of the archaic parts of the brain are by far the more powerful and moreover they are interconnected with the functions of the cortex „as an amalgam". We could say that „pure consciousness" has its say only very rarely.

Intuitively we hypothesize a similar situation also in the system „culture". Also here we should distinguish the inherencies of the „archaic levels" (the level of animal wildness, the level of barbarity, the level of the utilitarian elements of civilization) and to define a specifically cultural subsystem as opposed to these.

We assume that the „non-classical documentation", unlike the other existing conceptions, should distinguish the above heterogeneity (And more: It should be pri-

marily interested in this distinction). It should distinguish „modus vivendi" and „culture" a do away with the primitive identification: „social structure" = „culture", „human behavior" = „culture". That is pure nonsense.

9.6.

The problem of adequate criteria arises.

Traditional documentation is somewhat inadequate in this respect.

It is the kind of „backwardness" for which P. Kapica criticized social sciences. This backwardness — as we have said — does not consist in insufficient mathematization, lack of „exactness" or lack of computerization. As far as traditional documentation is concerned, we see the problem in its global orientation, characterized by features such as (a) empirism, (b) isolationism with regard to the macrosystem of social existence, social practice; (c) isolationism with regard to the historical process (which is directly accessible only „here and now" and cannot be reduced to a „past"); (d) the anachronic, idealistic notion of „pure science" (eliminating the subjective factors in science); (e) ignoring the postulate about theoretization of science.

Some remarks regarding these characteristics:

ad a) Among the numerous criticisms of empirism, the following opinion is worth noticing for its uncompromising tone: „This allegedly existing (in natural sciences — R. B.) method consists in collecting facts and deducing pieces of knowledge from them. Some historians slavishly ape this method assuming that they can thus collect evidence in the form of documents (...) This apparent method can never be effective because it is not possible to collect observations or evidence without first formulating the problem..." (K. Popper).

ad b) We assume that it is not possible „to formulate the problem" in regard to culture in a vacuum, but only in a close contact with the actual situation of the whole social existence; „non-classical" documentation will apparently start from detecting actual problems and confronting them with analogous problems discovered in past states of the dynamic system „culture".

ad c) The historical aspect is inseparable from the „spatial" aspect: „Non-classical documentation" should in this sense be the documentation of the historical process which is directly accessible only through the „here and now" situation, through personal experience and reflection.

ad d) Separating science (particularly social science) from the social and individual „time-space" is associated with the illusion of absolute knowledge. „Non-classical" documentation will apparently opt for a more rational view: „First of all (...), it is the fact that in solving many scientific problems it is not possible to reach common conclusions solely on the basis of methodological directives. (...) The human and the historical aspects (...) are always among the formative components of opinions..." (T. S. Kuhn).

(Let us note that this idea corresponds with the modern view of history in general: „...to fulfill the directive of integral explanation whose task is to explain the integrity of history (...), it is not enough to explain the subjective and the objective aspects of the historical process (...), it is necessary to interconnect the two progressions" since „...history is a dynamic amalgam of the subjective and the objective aspects of the process of change" (J. Topolski)).

ad e) The key problem is the question of the theoretization of science. Apparently an analogous regularity holds here as in the above quotation from the theory of history. Sociological, psychological and biological levels of the research in culture should be interconnected by a single integrating aspect. In other words: the task is to discover the essence.

10.1.

We adopt a simple definition according to which the essence of things is „...the sum of hidden links, relationships and internal laws determining the basic features and tendencies of development" in the exa-

mined system. „To discover the essence is possible only on the basis of abstract thought and of constructing a theory of the examined process. It is a qualitative leap from the empirical to the theoretical level of knowledge which is associated with the discovery of the principal and decisive aspects of objects . . ." (Dictionary of Philosophy).

Emphasizing that „only some kinds of causation are significant", G. Weinberg presents the example of the law of gravity with the note that it is the greatest generalization that human reason has ever reached. The characteristic of a genius is the capacity to simplify, but „research in the methods of simplification makes science to a certain extent independent of genii."

The question we are confronted with may be non-algorithmical (it is, so to speak, a „koan"), but it does not require a genius. The question is: „What is the main link, what is the determining factor in the case of culture?" Or, in other words: „What is the essence of culture?" „Which kinds of causation are relevant to culture?"

In the Newtonian system the determining factor is the Sun. Newton reduced all the relationships in the solar system to individual relationships between the Sun and the individual planets.

10.2.

What is the equivalent of the Sun in the system „culture"?

The answer cannot be but intuitive — the essence is yet to be discovered. Abstract thought cannot start in a vacuum. „. . . every discovery contains an „irrational element" or „creative intuition"" (K. Popper). Therefore I will take the liberty, without any guarantees, to propose the following solution as a hypothesis:

The main link, the „essential kind of causation" in culture is „spirit" — understood realistically as the creative energy of consciousness, as the function of the system: „SELF — intuition — imagination — intellect — will".

In this sense, the „essential kind of causation" is Man. Man, to the extent that he is able to express himself at the level of spirit as its mediator. This represented and still represents today — in the actual state of „relict culture" — the center of gravity of an authentic culture-forming activity. And in this context, we also see the main criterion for „non-classical documentation".

We believe that such a formulation of the essence of culture can save both theory and research practice of documentation from the dangers of biologism, psychologism or sociologism.

10.3.

Durkheim's great discovery that a „social fact" is not reducible to psychological or biological factors masked — it appears — for long decades, the real ontological perspective. No one discovered, that the nonreducibility of social integration does not imply that this integration is the „ultimate instance" of human existence. An approach which uses the level of society as a fetish eliminates from the picture the higher-order wholes: species, nature, and finally the universe (moreover, with the relevant levels of time).

This allows us to extrapolate on the „axiom of sociology" and say: if we want to preserve the universal essence of man, then we cannot reduce the „fact of universality" to aspects of nature, or to aspects of human species, or to aspects of the social organism.

On the basis of the very same law of system theory which Durkheim intuitively discovered for sociology, we postulate the reflection of „cosmic perspective" as the fundamental and non-reducible aspect of human existence — of existence in culture. This means: Existence, not of some behavior, not of some modus vivendi, but existence at the level of spirit.

10.4.

In „cosmic perspective" we shall distinguish three factors:

— The first is the universal relation (specifically expressed at all the levels of reality, including the human world and human „modus vivendi") defined in our era in terms of thermodynamics (later adopted by the information theory): „entropy" : „negentropy"; these are terms corresponding in form to the Antiquity relation: „cosmos" : „chaos", the biblical relation „life" : „death", or the oriental relation: „yang" : „yin". In contrast with the classical thermodynamics, the non-classical thermodynamics discovered the dynamic aspect of this relation by proving genuine cases of spontaneous genesis of structures in the entropic processes (I. Prigogine).

— We see the second factor in the category of Infinity. It is not the abstract infinity of mathematics, but the concrete, real forms of Infinity in both the microcosm and megacosm. This touches upon the problem of knowledgeability: althought philosophy proclaims essential knowledgeability of the world, at the level of practice (and this is, as we know, the decisive level) knowledgeability of the megaworld is out of the question if only for quantitative reasons (H. von Ditfurth presents, for example, an illustrative consideration of the knowledgeability of a single one out of the billions of existing galaxies: even if a miracle occurred and man would be able to move independently of time in the sense that one second would be enough for examining one star including its planetary system, in the case of the galaxy in Andromeda with its 200 billion stars, a man would manage in an average life with an eight-hour working day, to examine only 0,3 % of the existing objects). But it is not only quantitative obstacles that stand in the way: „. . . under the absolute zero, the concept of temperature loses meaning (. . .) In a similar way, we can also adopt the concept of the absolute zero of time (. . .) This way is open and will probably remain that way forever" (St. Weinberg). „. . . it is in the sphere of the fundamental problems of physics, astronomy and biology that we encounter essential and at the same time thoroughly mysterious questions" (V. L. Ginzburg). A third voice will finally bring us to the third factor of the „cosmic perspective": „Why are we excited and attracted by the mystery of the universe and the microworld? Because it is the mystery of our ability to learn. Man is directly created to learn. In this lies the meaning and the goal of life of our civilization. And that is why we shall never stop to look in the mirror of the Universe" (E. I. Parnov).

— The third factor of the „cosmic perspective" is the Secret, an ancient category of realism — the Mystery. Only the modern bourgeois in his pride and blindness has not been able to see the real proportions of the world and to anticipate the real abysses of time; driven by the paranoid hallucinations of his own omnipotence, he constructed the fiction of a closed, finite, reduced world in order to enthrone himself there as the „master and ruler" (R. Richta). In his obsessive attempts at building „Babylonian towers", he used all the available means — particularly language with its suggestive power. However, even language became a means of alienation: „The physiologist I. S. Pavlov (. . .) claimed that the ability to create concepts by means of words contains also the possibility to loosen the ties with reality, to build an incorrect picture and links that do not exist in reality. 'The frequent excitations by the word', wrote I. P. Pavlov among other things, 'removed us on the one hand, further from reality and that is why we must be always careful not to distort our relationships towards reality. ‚To remove' — that is the original primary function of 'excitation by the word'" (B. F. Porshnev).

A culture built on real fundaments of the „cosmic perspective" makes it possible for man — „the prodigal son" — to come back from the vacuum of speculations and verbal games into the sphere of realistic dialectics.

11.

The contents of the „cosmic perspective" open in front of the consciousness of „man — the universal being", a vision of the infinite perspectives of the Universe. The encounters between the microcosm and

the macrocosm create a non-reducible basis of harmonious existence; of an existence that is dynamic and fruitful. In optimum cases, they evoke the flames of imagination, revive in man his hidden Promethean core. They provide a feeling of security — the prerequisite for any creative, nonegotistical activity. This expands in the human world the region of „negentropy"; man becomes an element of „cosmogenesis". He is on the Road.

Man has a chance only as „homo viator".

From the above outline of culture — the negentropic system — we could proceed to outlining the pertinent theory of documentation. It is, alas, not in our power to do it within the scope of this paper. We can only suggest that:

(1) An adequate theory will have to reflect the typology of the cultural forms of activity and existence in all their aspects:

— from the viewpoint of all the relevant relationships of man (toward the world, nature, life, society, neighbor, work, himself, etc., etc.);

— and in all the spheres, particularly those considered à priori „cultural" par excellence (religion, philosophy, art, science, ethics, morality, etc.).

(2) The theory of non-classical documentation will have to construct criteria allowing for the orientation in the confusing (polymorphous or even amorphous) spheres, such as the synchronous „modus vivendi" of individuals, social groups, classes, social macrostructures (the criteria will be reliable if they are creatively derived from the fundamental relationship „entropy: negentropy").

(3) Even before the origin of non-classical thermodynamics and synergetics, the biologist E. Neumann noted the mechanism of the spontaneous appearance of configurations and closed wholes which — as he claimed — is characteristic of nature, Biology has shown that the ability to distinguish states of entropy (high probability) from processes of negentropy (low probability) is possessed even by the most elementary units of living mater — the cells. Detection of closed wholes (the cell itself is such a whole) — nota bene closed only relatively — as, it appears, the fundamental prerequisite of existence. Here we apparently have to look also for the foundations of semiotics and symbolics.

(4) There appears here a kind of a hidden prototype of creation in general; the mechanism of creation as a universal principle. It appears as if the spontaneous origin of molecule configurations was an expression of the same law as that operating in the origin of a metaphor, scientific discovery, musical form, etc.

(5) The theory of non-classical documentation will have to create the prerequisites for the detection and identification of such „metaphoric tendencies", first of all directly in social life: in interpersonal relationships, in relationships between the individual and various wholes in the hierarchy of social structures. The decisive factor in culture will continue to be the principle of creation, the ability to overcome the tendencies to „divide and rule", to anaesthetization, to the fixation of stereotypes, to stagnation, routine, banality, etc.

(6) Nonclassical documentation will apparently detect the expressions of egocentrism and egotism — in the sphere of world perception, in the sphere of thinking, as well as in the sphere of activity, correlated with the word „I want!" (= I demand from others — in Krishnamurti's sense), or with the tendency „to possess" (in the sense of K. Marx, E. Fromm), and distinguish them from those growing out of the capacity „to be" (to perceive disinterestedly, to think disinterestedly, to act disinterestedly).

(7) This implies that „non-classical documentation" will probably step outside and go beyond the traditional limitations and will expand and deepen the repertoire of its present activities.

12.

The power to distinguish will apparently go beyond its present limits and become a point of departure

for emphasizing, setting of priorities and building hierarchies.

On this road, documentation will mature to a significant step: it will be possible to link its outputs with the mechanisms of education.

A feedback will come into being — conditio sine qua non of evolution and progress.

Documentation as a probe sui generis, based on testing the actual state of the society — „a probe with a philosophico-theoretical drive" — will undertake exploratory, theoretically and methodologically precisely aimed expeditions to more or less distant parts of history and will come back with new spoils, much more valuable than the traditionally understood „scientific knowledge", since it will be able to come back with a dose of wisdom for which the world so impatiently waits.

The mechanisms of education are the fundamental elements of the system of culture we have called „culture in statu nascendi", in which documentation participates. Naturally, the „classical education" which has had its provable share in the processes of increasing entropy in the human world must be replaced by „non-classical education", oriented negentropically.

The task is extremely difficult: a state of the type „disiecta membra" must be transformed into a state of the type „coniunutio oppositorum". That means: if mankind wants to survive, it must make a „miracle" „by its own hands". There is no alibi for anybody.

It is necessary to cross the bridge from the cursed Castle into the world. The road must be opened from both sides. If the bridge is good, the arch of a rainbow will appear above its arch. It will be the light of wisdom signifying that „everything is all right".

It will turn out that things were „upside down" and that now they are all right.

This means — as it has always meant — that they are „in statu nascendi".

(„. . . not everything is lost yet . . .")

POST SCRIPTUM

In conclusion, I would like to express my sincerest gratitude to the first readers of the presented paper – Academician Ján Dekan, director of the Institute of Art, Slovak Academy of Sciences, Professor Milan Zigo Ph.D., head of the department of Marxist-Leninist philosophy, Comenius University in Bratislava, Associate Professor František Novosad Ph.D., lecturer at this department, Associate Professor Ladislav Mokrý Ph.D., chairman of the section of musicology of the Union of Slovak Composers, for drawing my attention to shortcomings in the original version of the text. I did my best to embody their comments directly in the present text. Several points, whose discussion would lead to substantial revisions of the manuscript (which would be prohibitively time-consuming) are elucidated in an „epilogue" writen **ex post.** The core of this new text deals, in particular, with studies by G. Shakhnazarov and E. Markaryan, as well as with an unpublished paper of P. N. Fedoseyev, to which Academician Ján Dekan kindly called my attention.

I would like to thank most cordially Ivan Mačák Ph.D., one of the editors of this volume, for his patience with the last stylistic revisions of the manuscript and for his assistance in improving its readability. My remarks are dedicated to him and the members of his research team to commemorate the tenth anniversary of their enthusiastic and inspiring activity.

■

The immediate stimulus for writing the text on problems of documentation derived from my discussions with Ivan Mačák on problems of tradition and folk musical instruments, as well as from my sporadic participation in the documentation project that Dr. Mačák has initiated.

In the course of writng the paper, however, the center of my attention moved away, so to speak „automatically", from the problems of ethnomusicology and documentation of folk musical culture towards those of culture in general. I realized rather late that the problems of ethnomusicology were only a kind of „trigger-impulse" for an attempt to approach the problems of culture in the contemporary

world. Since the very beginning, culture had apparently been the primary motive for these deliberations, although I had not realized it for quite some time. I was also significantly determined by the environment and actual contexts in which I move.

Why then did I want to approach culture? From a systems approach (which has become an integral part of the Marxist methodology of science), there follows the necessity to analyze problems of a given system with respect to relationships with a superior system - macrosystem. In culture, we see one of the fundamental macrosystems of scientific knowledge.

Besides, the Marxist methodology suggests already in its classic form that concrete problems of theory can only be seen against the background of concrete problems in practice. We thus start from a conviction, that the requirement of a unity of theory and practice applies also to social sciences, including musicology.

Finally - if we are aware, at least in part of the dramatic situation of mankind

> „... in the interests of self-preservation (emphasized by me) of the society, present epoch .... requires entirely new mechanisms which have no structural or functional equivalents in the processes of bioevolution, and not even in the previous stages of social development. .... The problems associated with treating human society as a special adaptive system ... represent extraordinarily complex tasks for contemporary science. Whatever happens, they have to be resolved, for mankind has no other alternative (emphasis is mine)" (E. Markaryan 1982, 405).

and if we are simultaneously aware of the pressing nature of problems arising in the living practice of socialist society -

> „Among the most important problems of social sciences requiring deep elaboration, we should include economic, social and legal problems of scientific and technological development in their unity and mutual relationships. However, questions of world outlook, ideology and education also arise here." ... „Further development of advanced socialism includes ... a scientifically justified concept of educating the new man." ... „In an examination of the conditions and perspective for an optimum realization of man's creative powers, one of the most serious and complex problems both for theory and practice is to ensure a unity of socialist consciousness and behavior, to create a socialist system of needs, interests and motives, to attain a comprehensive wealth in the spiritual world of personality... The research of the spiritual life of contemporary man is unthinkable today without a study of the moral foundations of personality..." (P. N. Fedoseyev 10, 13, 16).

- we are unavoidably led to the question of culture.

What is its substance? How has it developed until now? What has been its competence? What chances has culture of today to participate in building up a rationally stuctured, just, and peaceful world? That is to say, all human efforts should be oriented in their final consequences towards ensuring conditions for justice and peace:

> „How do Marxists see the future world order? To answer ... would mean to present extensive initial material ... howerer, not all the i's have been dotted yet, and it is not in the traditions of Marxism-Leninism to describe the future in detail... A prerequisite for such an order is the victory of socialism all over the world ... howerer, we are thinking of a high degree of development of this social system" (G. Shakhnazarov 1982, 394).

In this connection, a brief formulation of one of the most important Soviet scientists and thinkers is well worth mentioning:

> „When shortage of materials and energy resources becomes pronounced on a worldwide scale, when this shortage starts to have a catastrophic influence on the welfare of people, then mankind will have no alternative. It will have to start reducing armaments ... moreover, people will start to feel that they live in „one apartment" and that they have only one common enemy - the approaching world crisis..." (P. L. Kapica 1982, 414).

In his text, the author discusses the topical problems of mankind and the global tasks facing contemporary science as a whole.

„To resolve globally the problems of mankind", „to participate in building a new order", „to solve the acute problems of society", etc. - these are statements that sound at first absurd from the viewpoint of traditional „classical" science (of which, as we know, an ever higher degree of specialization, i. e., an ever narrower radius of action, is characteristic). However, when we situate scientific knowledge on the horizon of culture these statements lose their absurdity. Their unusual nature is mediated also by another factor, namely the trend towards an integration of sciences. The integration processes in science, together with the cultural context of social sciences, create conditions for the origin of a new type of links between science and society.

These links must be, first of all, realistic.

> „An important condition for the development of a realistic attitude towards socialist society ... is the elaboration of the Marxist-Leninist teaching on the contradictions of social life" (N. P. Fedoseyev).

It is emphasized that these contradictions cannot be ignored; nor can they be made into fetishes; they must be treated as a driving force of development. It is not enough to discover them - there is the danger of destructiveness - it is necessary to see them as stimuli for positive solutions, stimuli on the way to higher levels of integration.

For this reason, we wish to stress that the primary ambition of this paper was to outline a concept of a positive and complex solution of the problems of contemporary culture expressing themselves as the so-called „relics of the past".

It is a difficult problem: in „relics of the past" we usually see only the phenomenological level of contradictions; their essence, howerer, - as we tried to prove (or at least suggested) - lies deeper. Discovery of the essence of „relics" has become a topical task **today only**; that is to say, only the present state of scientific reflection creates conditions for an adequate analysis of complex and supercomplex objects of reality, among which society as a whole, and also culture undoubtedly belong. The above mentioned trend towards an integration of individual scientific disciplines is an essential condition for a realistic approach towards the complexity of discoverable reality.

The key question associated with the present state of culture is that of the consciousness of contemporary man in connection with the pressing task of educating a „new man".

> „F. Engels pointed out three historic tasks facing mankind: to master nature, to master the social relationships themselves and to master oneself, one's own internal world and the conduct resulting from it. The world technological civilization has traditionally given priority to the first task. Marxism-Leninism provided a theoretical base for the development of a world socialist system, within which all socialist countries solve also the second task. The third task can be resolved only under conditions of socialism and communism" (V. P. Tugarinov 1974, 7).

Following upon the opinions of Shakhnazarov, we can assume that a „high degree of development of this (socialist - R. B.) social system" depends on the level of the solution of this task.

> „... the task to educate the new man has become a compass ... It is not a matter of expanding knowledge, but of a fundamental change at the whole level of human consciousness, a change in the orientation and intentionality of the internal life of man" (V. P. Tugarinov 1974, 7).

The thesis that „consciousness cannot be reduced to knowledge and thought" (Tugarinov) corresponds to the present state of knowledge in natural sciences. Representatives of social sciences also point out the complex character of consciousness:

> „Consciousness ... has a complex character. It encompasses not only biological (the capacities and specificities of the reflection of living matter), psychological, neurophysiological but **also sociological** (italics are mine) aspects. It is a question of „superindividual consciousness". It is remarkable that the author takes note of a correlation between this complexity and the complexity of reality being reflected: „Consciousness is characterized by the complexity of its structure. It is given by the character

of what is reflected and realized, i. e. by the complexity of all the forms of motion" (F. Zich 1984, 12).

In connection with the integration of sciences we consider it useful to emphasize in particular, that „the difference between natural sciences... and social sciences of consciousness is disappearing" - as stated by Tugarinov.

„At the present time, a process of mutual influence and merging of sciences about this sphere of reality which has been hitherto considered as an exceptional phenomenon, not subject to research methods of social and natural sciences, should take place. In this process of synthesis of sciences and scientific methods, the most important fact to our view, is the rapprochement of neurophysiology, psychology and the theory of knowledge...; the philosophical theory of knowledge is being justified by neurophysiology, psychology and new sciences, such as cybernetics, semiotics, and others. ...This promising process which discovers specific mechanisms common to different systems, aims, in its final result, at solving the task of scientific control of psychic processes. If the theory of knowledge ignores these mechanism, then it can be only of an ideological and methodological, though not of a practical importance" (V. P. Tugarinov 1974, 189 - 190).

■

As to integration of sciences in general - since these problems have not been so far adequately registered in musicology - we wish at least to note that this is not merely a matter of interdisciplinary research in the traditional sense:

„Integration of sciences is a qualitatively new type of their coordination. An interdisciplinary research into complex problems does not have to be identical with integrative coordination of sciences... Integration of sciences is based on the assumption that various areas of scientific knowledge have common research problems and goals and also a common system of instruments of learning... The necessity of integrative coordination between social and natural sciences is, at the present time, dictated by a number of factors... The determining and fundamental factor is the need to influence social processes with the aim of their scientific and verifiable control" (E. Markaryan 1982, 398, 399).

Integrated systems must have a „common denominator", that is to say, from an integration of sciences, there follows the postulate of the unification of instruments of learning; this role is fulfilled by metascientific disciplines among which an important role is played, in particular, by the so-called systems approach and the methods of cybernetics.

„The task of the systems approach is to discover ...logical procedures which will establish relationships between qualitatively different objects... Theoretical assumptions that make it possible to find the invariants in the objects of social, natural and technical sciences and ensure their integrative coordination are based... on the principles of self-organization. ...The specificity of simulation models... resides in that they are based on systems-cybernetical principles of self-organization and adaptive behavior... Of course, our knowledge about society as a very complex adaptive system is extremely fragmentary" (E. Markaryan 1982, 399, 400).

■

The concept of a positive solution of present cultural contradictions that we have developed in this paper, is based on an intuitive hypothesis about the comparability of psychological and social structures on the basis of the principles of organization and control. The presented opinion of a leading Soviet methodologist provides a suffiсiently authoritative theoretical and philosophical premise for this hypothesis. The similarities between our considerations and the concepts discussed by Markaryan are, at some moments, striking. Together with other authors we emphasize, for example the idea of „cosmic perspective". E. Markaryan states in this respect: „the functioning and development of society... in the context of natural environmet results from a combination of... specific social laws and laws of another level. Among the latter are certain universal cosmic laws to which all the spheres, without exception, are subject (e. g., laws of conservation,

laws of thermodynamics, the law of parity) and the laws of lower levels of the organization of the matter included in the context of social practice" (E. Markaryan 1982, 400). This has, of course, far-reaching consequences:

> „Today a qualitatively new task appears, namely to consider and study systematically the behavior of these laws at various levels of the organization of life, including the functioning and development of s o c i e t y" (emphasis is mine) (E. Markaryan 1982, 401).

Our concept is in agreement with Makaryan's thesis: „... it is necessary to combine organically a concrete approach towards culture with contemporary research in the thermodynamics of open systems." The concept of culture that we present derives from the „new thermodynamics", above all the dialectic opposition of culture and civilization processes, as correlates of negentropic and entropic processes (from the standpoint of the third stage of social development aimed at rebuilding consciousness - see Engels' opinion quoted by Tugarinov) - while Markaryan speaks of culture as a „universal technology of human activity". We justify our standpoint by the indisputable fact that human activity often has an „entropic", i. e. destructive, character.

The important thing is, however, the analogy between the „negentropic" function of culture postulated by us, and Markaryan's words: „The specific character of the adaptivity of man... is in that it can be reached... through a social and cultural reconstruction of human individual by means of an universal change in his external and internal enviroment." Our paper clearly aims at the second from the above tasks - it deals primarily with the reconstruction of „internal environment", i.e. the minde; the goal is to reach a state in which consciousness controls unrestrained psychic activity; finally, the goal is a „moral personality".

■

We start from a conviction that the biggest obstacle on the way to these goals are phenomena designated generally as „relics of the past". We said above that it is a complex problem; the diagnoses in this sphere remain, as a rule, at a phenomenological level. Our hypothesis (whose ambition is to get closer to the heart of the matter, though it is not presented expressis verbis in the text) is based on a suspicion that the so-called „relics of the past" do not concern only commonly incriminated phenomena, but that they are contained - seemingly paradoxically - also in mental structures that we accept and that we use to criticize the „relics".

From the viewpoint of traditional, classic, „linear" thought, this looks as a kind of vicious circle: we criticize relics from a relict position.

The systems approach suggests a solution of this paradox that is logically correct; by means of an „integration of sciences", it leads us to specific forms of a hierarchically ordered reality. We can find hierarchic structures also in the psychology of cognitive processes, in thinking - in fact, we already mentioned this in connection with consciousness.

To move from the level of phenomena to the substance requires us to overcome the level of the so-called „standard consciousness" and also the level of „verbal thinking". To reach the level of substance means to mature psychologically to the level of „theoretical consciousness":

> „The important thing for research is to clarify the relationship between theoretical and standard consciousness. Standard consciousness originates under the empirical conditions in the life of a society... in everyday conditions... theoretical consciousness goes beyond the framework of standard consciousness of people and thus transcends the conditions of ordinary reproduction. The main difference (ULEDOV) resides in generalization... and in the capacity to get to the essence of phenomena. Standard consciousness remains at the surface, it is not systematic or integrated" (F. Zich 1984, 14).

Since we have differentiated between consciousness and thought - it is necessary to add that also here, in the sphere of mental processes, the relationship is analogous: it is necessary to reach the level of dialectical-systems thinking:

> V. V. Leonovičová and V. J. A. Novák differentiate three stages in the development of rational behavior, namely (a) the stage of primary dialectical thinking - „not as yet much influenced by the s c h e m a t i s m o f s p e e c h" (emphasis is mine), (b) the stage when thinking is influenced „and often a r t i f i c i a l l y s i m p l i f i e d by speech"

(emphasis is mine); it is the analytical stage which is based on isolating phenomena from their contexts and naming them; the authors note that „a great majority of people never go beyond this stage"; finally, there is (c) the synthetic stage, which allows for an understanding of relationships and „real dialectics of the world" in developmental contexts; only the greatest scientists, artists, inventors, etc., reach this stage spontaneously" (Leonovičová - Novák, 1982, 255).

From the above, it follows that when someone considers „theoretical" (scientific, philosophical or artistic) problems in the gnoseological sense, it does not necessarily mean that he thinks at the „theoretical", „synthetic" (dialectico-evolutional) level in the psychological sense. It is apparently possible to think, for example, about the „heart of the matter" at the level of „verbal thinking" - i. e., at a level which does not create the psychological prerequisites to approach the level of substances. In fact, the impression often arises that problems of the essence of things - „theoretical" problems par excellence - are dealt with at the level of „standard consciousness" and „verbal thinking". Perhaps this is what P. N. Fedoseyev has in mind when he says: „Often analysis ... is mistaken for a construction of brilliant schemes and for abstract considerations of the specific quality of contradictions in a socialist society".

> Fedoseyev speaks about this in connection with an opinion that today „... tendencies to break away from reality ... and to explain the development of socialist society in a simplified manner ... are particularly pronounced ..." From this, the task results „... to examine the real processes and perspectives of building a classless structure of society ... at all levels ... beginning with the level of economy and ending with the level of spirit" (Fedoseyev).

■

The core of our text is a polemics with the bourgeois mentality and morality, with the relics of these structures hidden under the surface of socialist social existence (i. e., not only at the individual level) and with their reflection in the classical science which forms the point of departure for ever more autonomous civilization processes (it is basically a kind of fetishization of Engels's „first task"). Our polemics is based on a hypothesis that, as a result of the necessary priority of economic, social, and class aspects of existence in the initial phases of the socialist revolution, in social sciences - in particular in the sciences of culture and art - there occurred a fetishization of these aspects to the detriment of biological aspects of human imagination, emotionality, mentality but also of the moral code, and of the influence of these aspects on human activity, human behavior, interpersonal relationships and social practice in general.

P. N. Fedoseyev points out very emphatically the necessity to distinguish the individual stages of building socialism, since they are characterized by „specific contradictions that must not be confused" (Fedoseyev). We assume that ignoring the fact that relatively autonomous biological, psychological - including mental - mechanisms are hidden under the level of social structures, contradicts the present stage of building up of socialism - that is to say, it contradicts the level of knowledge science has reached at this stage. In this connections, we assume that to ignore the achievements of contemporary science means to close to human existence the realization of Marx's fundamental concept of man as a „universal being". Not to respect this concept based on the thesis about a „dual nature" of man - his natural foundations and his latent capabilities to reach the level of a spiritual being - leads to inadequate diagnoses of social (including cultural) problems. The contradictions and conflicts resulting from the biological foundations of the human being have far-reaching consequences also for social existence, and in the ultimate balance, they represent one of the factors of the „global problems of mankind" mentioned earlier.

> „The examination of the regularities of development and of the interrelationships of social existence and consciousness makes it possible to understand in more depth ... the causes of negative phenomena in the socialist way of life, behavior, work and spiritual needs ... and to determine their remedies. On the one hand, it is clear that we cannot reduce all the negative phenomena to „relics" in consciousness only. On the other hand, however, the opposite extreme which states that negative phenomena ...

have nothing to do with the relics and influences of capitalism... is equally unacceptable" (Fedoseyev).

We must again stress the significance of the systems approach which protects us from the possibility of biologically or psychologically oriented reductionism. In fact, the systems approach eliminates the „either-or" alternative which is traditional in occidental mentality since the times of Aristotelian logic, and shows a solution on the basis of a hierachical structure of being. In a sense, „tertium datur" is operating here: it turns out that to reflect biological or psychological factors does not mean to eliminate social mechanisms. On the contrary - to reflect biological and psychological factors introduces a new content into social structures and concepts, as Tugarinov or Makaryan show. Social structures - representing a higher level of integration - have an important transformation function with respect to biological and psychological structures.

We assume, that the structures of capitalism potentiate the structure of „natural man", fixate his egoism and egoncentrism - in particular within the dominant class which is further able to realize in a covert form various forms of aggression, which transform natural rivality into competitive struggle, legitimize terror and violence and legalize exploitation.

We assume that the structures of socialism contain the necessary economic, social and class conditions for the overcoming of the level of „natural man", for his transformation into a „harmonious personality capable of an all-round development", or as P. Kapica says - Into a „quality man". As we noted, the theoretical basis for this is Marx's concept of man as a „universal being", man who overcomes the constraints of the „body" (atavism, instincts, domination by uncontrolled emotions and related mental processes with which the „natural man" usually identifies himself), man who, thanks to the reconstruction of his „internal environment", gradually reaches a new qualitative level of consciousness.

> „In examining the conditions and perspectives of an optimum realization of creative powers, one of the most serious and complex problems for both the theory and practice is to ensure a unity (emphasis is mine) of intelectual, physical and esthetic development, a unity of socialist consciousness and behavior... A global examination of the whole motivational sphere is possible only by a combined effort not only of all the spheres of contemporary scientific knowledge, but also of science as a whole, as well as of literature and art (Tugarinov 1974, 16).

The realization of Marx's program is made possible by „nonclassical science". To persevere on the positions of classical biology and, in particular, psychology (i. e., on the positions of prescientific psychology - as emphasized by A. N. Luriya) i. e., to disregard the complexity of the human being, resulting from the stratification of individual psychic structures in the course of evolution, while attempting to resolve the negative phenomena in the life of individuals, social groups and even society as a whole - this is what leads to our paradox: to the criticism of „relics" from „relict" positions.

The consequent need to realize Marx's concept is today emphasized by the ever more urgent postulates about the „cosmization" of human existence, human consciousness This is being pointed out by representatives of biological sciences (Verdansky, Inyushin), psychology (Rubinstein, Leontyev), physicists, astronomers, cosmologists, astrophysicists as well as social scientists:

> „Man venturing into space does not expand his relational sphere only in the spatial sense. The influence of space enables us to emphasize what is really human (emphasis is mine), the „invariants" of the human individual and human species." A remarkable view is also presented according to which „the artists ... have more possibilities today to venture into cosmic distances and cosmic future. In fact, they are concerned with artistic modeling and prediction of what science and technology utilize only in part. For this reason, a comparative study of the scientific and artistic social forms of consiousness with respect to the prognosis of future ways of learning would be useful" (Ursul 1981, 188, 198).

We see the solution of this problem, in connection with the topical problems of art, in the hypothesis of „culture - regulator" - a regulator comparable in its controlling

functions to consciousness as a latent, potential regulator of psychic processes. Culture can function as a regulator it can positively influence the elementar processes in the living practice of individuals and society (e. g., the civilization processes), i. e., to function „negentropically" if it is indeed oriented to the „cosmic perspective" of the human being and human species.

In this paper, we have attempted to construct a cybernetic model (in a rudimentary form) of culture treated in this way as „culture-regulator", i. e. as a dynamic system with memory, appropriate feedbacks, inputs and outputs linked with the „macrosystem" - social existence in its whole complexity.

A part of the memory of the system - its subsystem - must be a „nonclassical documentation". It should not be a documentation oriented scientistically, objectivistically and empirically; it should not be oriented to internal, „purely scientific" problems; it should not be documentation reducing culture either to behavior treated generally, or even only to its material results. Finally, it should not be documentation oriented to the „past" - to register and amass facts and objects that originated in the „past". On the contrary: it should be documentation oriented to history treated dialectically, as a struggle of negentropic tendencies with the forces of entropy. „Nonclassical documentation" should be oriented to an essential differentiation of these opposing forces at the phenomenological level of culture, it should reveal the essence of culture as a negentropic process in the development of society. It should be therefore in an intensive contact also with the present: the acute problems of the present should stimulate research and interpretation of the material obtained, it should inspire the formulation of hypotheses needed for scientific research.

> „The elaboration of a synthetic theory of cultural traditions on the basis of the self-organization principle for the research into the deep mechanisms of general and local models of activity is of a primary significance for global and rational modeling ... only a research in the dynamics of cultural traditions and registering of the probable directions of development determined by them makes, it possible to introduce a historical dimension into the simulation models of social system and to bind into one theoretical knot the past, the present and prognosis for the future" (Markaryan 1982, 405).

A logical consequence is the requirement of linking the output of documentation - a subsystem of the „culture" system - with educational processes in general. The education of „quality man" postulated by P. Kapica who sees in it a global problem of science as a whole, indeed „the problem number one" as to importance and urgency, cannot omit scientific disciplines that are social par excellence: „Nonclassical documentation" will be able to participate in this task only in a context of „nonclassically" treated culture which, under the new conditions - in the „nonclassical" socio-economic structures of socialism - must find its essential specifics and to emerge from the multitude of civilization processes as a relatively autonomous structure that is spiritual in its essence. Whereas civilization processes aim at ensuring consummation - culture should aim at the opposite pole - the spiritual one: it should stimulate the development of man, the reconstruction of his nonclassically treated consciousness, it should lead towards spontaneous ethos and spontaneous creativity (the commonly used term „consumer culture" is only a sorry symptom of the critical state of reflection in this sphere). „Research into the spiritual life of contemporary man is unthinkable without research into the moral foundations of his personality" - emphasizes P. N. Fedoseyev.

Without its being rooted in concrete existence, in its concrete information and energy processes (which are inseparable), the category of spirit becomes a mere abstraction which is unable to provide man and society with a real basis in the struggle with the forces of entropy - and not only with the external forces; internal entropy must be mastered as well. Let us note that the „struggle with nature" can no longer have the existing character of a „fight with an enemy" (plundering, devastation, violence, etc.) - it must be a struggle aiming at a harmonious coexistence. From the above, it follows (only seemingly paradoxically) that the development of „culture-regulator", a culture aimed primarily at educating the new man, „quality man", who is still only a potentially spiritual being (i. e., only a potential „homo sapiens") and at educating the analogously treated society - depends on a deep awareness of his biological and psychological in-

variants with adequate attention to his links with the universe.

> „We are bound by our links with space, i. e., with matter, space and time, self-motion and self-contradiction of matter, it is not possible to jump out of here (emphasis is mine) to consider a system without these links - the laws of natural activity, thought and expression are linked to the laws of the space". The author specifies this fundamental idea also with respect to the relationship entropy-negentropy we have exposed: „... as if we travel through the space on a train from which we cannot jump out. The fundamental source of motion is not a contradiction treated abstractly and generally ... but above all, the contradiction of two tendencies in the limit (J. Zeman 1981, 166, 161).

Theoretical and practical control of the forces acting on the human being in reality, both from outside and inside, is a sovereign task of modern socialist society. At the present stage of its development, socialist society apparently must - not only for pragmatic reasons, but primarily for essential reasons - break away radically from all practices that lead to the devastation of nature - both in the „external" and „internal" environment of man. The principle of a higher level of integration is binding in all the spheres of reality. This level could be compared to the application of Gödel's generalized theorem, from which - if I am not mistaken - it follows that the problems arising from the structure of a given system cannot be solved at the integration level of this system but only and exclusively at a higher-order level.

The criterion of progress is objective and universal because its orientation is clearly from entropy towards negentropy; this relationship provides a compass for orientation, for the evaluation of a given status quo any time and anywhere.

> „From the viewpoint of the presented model, it is possible to treat all objects, phenomena and processes as functions (expressions) of the contradictory unity of two general extreme tendencies, as specific intersection of these tendencies... Life and consciousness are situated against the background of the cosmic (emphasis is mine) gradient" (Zeman 1981, 163).

To the abvoe gnoseologic statements we add a voice which integrates the experience of a scientist with deep humanistic reflections:

> „A man who is alienated from nature, from the life of the universe, the play of elemental forces, is unable to create a relationship towards them, to find his place and strengthen his dignity face to face with these forces - such a man is worthless. ... The ability to see the esthetic and beautiful in nature (i. e., the ability to avoid the reduction and degradation of nature from a utilitarian standpoint - R. B.) - the sensitivity for nature represent a kind of condition for an ethical relationship... The basic problem of ethics is connected with the problem of man as a subject of consciousness and activity: it is a qeustion of the place of the other man in human activity (the other man as only an intermediary, an instrument, or as the goal of my activity)" (S. L. Rubinstein 1978, 488, 489, 337).

A few words on the character of the text

1. The text is not a scientific study. In spite of certain superficial features, it has the character of an essay which aims to reflect as much as possible the relevant aspects of the problems examined and to suggest a relatively complex perspective. Its aim is primarily to attract attention (and to call attention to conditions for solution) and in particular, to stimulate thinking in this direction. At a scientific level, this theme could be apparently mastered only by a team of experts in a long-term project.

2. The global, „macroscopic" perspective is, to a considerable extent, intuitive and thus also subjective. The laguage of the text coresponds to this fact - it is largely metaphorical and expressive, with a tendency to emphasize rather than mask problems. These are elements associated with artistic rather than scientific perspectives - this is, however, justifiable in a situation in which adequate scientific mechanisms for ensuring self-preservation of mankind emerge only gradually.

3. The text - at least from a subjective viewpoint - probes into an area which has been mapped only inadequately. A certain immaturity of concepts and formulations (fragmentary character, disproportionality, etc.) follows. It only draws the outlines of a vision that would require

a longer time to mature; in the context, however, an uncertainty whether the time for this work is not running out, is present. Some difficulties also arise from the confrontation of anticipated substances with customary mental schemes and their linguistic correlates which are rooted subconsiously. Three examples follow to illustrate this:

A. The text does not contain a direct answer to a feasible question, namely who should realize the proposed concept of culture. I tried to answer this expressis verbis in the epilogue. It is necessary to add that:

a) the project cannot be realized by people at the level of bourgeois mentality and morality;

b) the level of „standard consciousness" and „verbal thinking" cannot predominate in people who realize this project;

c) the project can be realized only by the socialist society, i. e., a society in which „negentropic" morality and mentality predominate;

d) i. e., the project can be realized only by the society as a whole, society at a higher level of integration.

B. The objection has been raised that the text appears „pessimistic". I believe that the regularities of the systems approach hold even here and that they entail that it is always a matter of interpretation. It is necessary to add that in the systems perspective the polarization of the world along the dimension „optimistic - pessimistic" loses its original meaning. Let us assume that „optimism" is a function of absolutization of the „negentropic" pole and that pessimism is an absolutization of the „entropic" pole. However, if we realize that in a real world these poles do not exist in isolation, autonomously - then the necessity follows to accept this fundamental type of dialectic unity as an elementary fact. Its subjective correlate is then an attitude that could be called „dramatism". From the viewpoint of dialectical logic, „dramatism" would represent a negation of negation of the - statically treated - „optimism" or „pessimism".

C. The term „relict culture" that we have introduced is apparently problematic. It is necessary to point out its ambivalent character which again depends on the point of view. This term is adequate only in retrospective, denoting those viable elements of culture, consciousness, tradition, creativity etc., that have not succumbed to erosion from he side of the bourgeois concept of consumer culture. From the viewpoint of perspectives, it would be more adequate to denote the „rational core" of culture differently, for example by the term „embryonic culture". We are speking of germs of a culture which is qualitatively new, associated with the specific qualities of „new man", in particular with his initiative, spontaneous creativity and ethos.

References cited:

Ashby, E.: Kybernetika. Orbis, Praha 1961.

Aurobindo, S.: Gedanken und Einblicke. Rascher Verlag, Zürich 1943.

Aytmatov - Ajtmatov, Č.: Deň dlhší ako ľudský vek. Tatran, Bratislava 1983.

Bertalanffy, L.: Člověk - robot a myšlení. Svoboda, Praha 1972.

Bogatyrov - Bogatyriew, P.: Semiotyka kultury ludowej. Państwowy Instytut Wydawniczy, Warszawa 1979.

Cousteau, J. Y.: Život na konci světa. Mladá fronta, Praha 1983.

Dąbrowski, K.: Trud istnienia. Wiedza Powszechna, Warszawa 1975.

Ditfurth, H. v.: Duch nie spadl z nieba. Państwowy Instytut Wydawniczy, Warszawa 1979.

Eigen, M.; Winkler, R.: Gra. Państwowy Instytut Wydawniczy, Warszawa 1983.

Fourastié, J.: Myśli przewodnie. Państwowy Instytut Wydawniczy, Warszawa 1966.

Ginzburg, V.: Astrofyzika. Alfa, Bratislava 1979.

Gurevich - Gurevič, A.: Kategorie středověké kultury. Mladá fronta, Praha 1978.

Heisenberg, W.: Fizyka a filozofia. Książka i Wiedza, Warszawa 1965.

Isotamm, J. B.: Ešte nie je... In: Osud motýľa. Smena, Bratislava 1984.

Kapica, P.: Experiment, teorie, praxe. Mladá fronta, Praha 1982.

Kon, I. S.: Utváranie „Ja". Pravda, Bratislava 1981.

Kuhn, T.: Štruktúra vedeckých revolúcií. Pravda, Bratislava 1982.

Kuznecov, B.: Rozum a bytie. Obzor, Bratislava 1974.

Lem, S.: Golem XIV. Wydawnictwo Literackie, Kraków 1981.

Leonovičová, V.; Novák, V. J. A.: Evoluce biologických základů lidského chování. Academia, Praha 1982.

Leontiev, A. N.: Činnost, vědomí, osobnost. Svoboda, Praha 1978.

Levi-Strauss, C.: Myśl nieoswojona. Państwowe Wydawnictwo Naukowe, Warszawa 1969.
Lorenz, K.: Vrozené základy učení. In: O biologii učení. Academia, Praha 1974.
Lotman, J.: O modelującym znaczeniu „końca" i „początku" w przekazach artystycznych. In: Semiotyka kultury. Państwowy Instytut Wydawniczy, Warszawa 1977.
Mandelshtam - Mandelštam, O.: Rozprava o Dantovi. Lidové nakladatelství, Praha 1968.
Markaryan - Markarjan, E.: Globální modelování, integrace věd a systémový přístup. In: Společenské vědy v SSSR 5. Praha 1982, 398 - 406.
Marx, K.: Spoločnosť a umenie. Slovenský spisovateľ, Bratislava 1983.
Paluch, A.: Malinowski. Wiedza Powszechna, Warszawa 1981.
Parnov, E. I.: Na křižovatce nekonečna. Orbis, Praha 1974.
Piaget, J.: Psychologie inteligence. SPN, Praha 1981.
Popelová, J.: Zrození filozofie. Mladá fronta, Praha 1977.
Popper, K.: Logika odkrycia naukowego. Państwowe Wydawnictwo Naukowe, Warszawa 1977.
Porshnew - Poršnev, B. F.: O začiatkoch ľudských dejín. Pravda, Bratislava 1979.
Prigogine, I.: cited in: Jiřina Stachová: K filozoficko-metodologickým problémům soudobé termodynamiky a synergetiky. In: Filozofický časopis Československé akademie věd 6. Praha 1984.
Richta, R.: Teoreticko-metodologické základy soudobé vědy. In: Dialektický materialismus a soudobá věda. Academia, Praha 1979.
Rubinshtein - Rubinštejn, S. L.: Problémy všeobecnej psychológie. Obzor, Bratislava 1978.
Selye, H.: Stresz okiełznany. Państwowy Instytut Wydawniczy, Warszawa 1978.
Shakhnazarov - Šachnazarov, G.: Budoucí světový řád: modely a řešení. In: Společenské vědy v SSSR 5. Praha 1982.
Thakur, R.: Sadhana. Šnajdr, Kladno 1930.
Topolski, J.: Rozumienie historii. Państwowy Instytut Wydawniczy, Warszawa 1978.
Tugarinov, J. P.: Filozófia vedomia. Pravda, Bratislava 1974.
Ursul, A. D.: Lidstvo, země, vesmír. Panorama, Praha 1981.
Weinberg, G.: Myślenie systemowe. Wydawnictwo Naukowo-Techniczne, Warszawa 1979.
Weinberg, S.: Piervsze trzy minuty. Iskry, Warszawa 1977.
Weiner, N.: Cybernetyka i spoledzeństwo. Książka i wiedza, Warszawa 1960.
Zeman, J.: Přírodovědecký a gnozeologický aspekt rozpornosti. Svoboda, Praha 1981.
Zigo, M.: Miesto Bachelardovho Nového ducha vedy vo filozofii prírodných vied 20. storočia. In: G. Bachelard, Nový duch vedy. Pravda, Bratislava 1981.
Zich, F.: Teoreticko-metodologická východiska zkoumání procesu formování socialistického vědomí. In: Filozofia 39. Bratislava 1984.
Zikmund, V.: Choroby z civilizace? Veda, Bratislava 1983.

June 1985

Part One

Documentation

IVAN MAČÁK, BRATISLAVA

On the Problem of Complex Dokumentation of Traditional Musical Instruments

In a discussion about the significance of „Unitary Field Theory", Charles Seeger (1970, 199) aptly characterized the difficulties and advantages of such a theory: „Eeach of us, to the extent he commands what he may regard as an ordered world view, has supposedly some kind of field theory. Much of it he will have learned from others. Its unitedness or unitariness will most likely, under present conditons, be found to be weak or nonexistent. The concern I emphasize is how well it is organized to comprehend the greatest number of factors and to order their interrelationship to best advantage in the particular orientation, scope, method, and aim of each individual man's work." In this contribution we want to further develop these ideas from the viewpoint of the demands for the documentation of traditional musical instruments in museums. Since Charles Seeger's contribution was published, many important stimuli have appeared which could contribute to the solution of these questions. From the viewpoint of the documentation of instruments in museums we have to recall the work done by Geneviève Dournon in collaboration with Simha Arom in the sphere of field-work protocols (1981) and many ohter studies elaborating partial questions and calling attention to the difficulties that will have to be taken into account when solving this problem.

An individual, as stated by K. A. Gourlay (1978), when making a decision about the topic and the conception of his research, is overly burdened by his education and his own idea of how things are. His opinions are probably determined by the stimuli resulting from the character of cultural phenomena he studies. This means that different cultures may stimulate researchers to formulate different questions. For example, the connection between the practice of interpretation and cosmological questions in Slovak folk music cannot be discerned from the stimuli of the material itself, but if we ask these qeustions for instance under the influence of studying this link in the musical culture of North American Indians, we shall find out that these questions do not lack meaning even in Slovakia. The link between musical expressions and the constellation of planets does not have to be reflected in every culture, but it is necessary to register the possibilities of these relationships. Mapping of the phenomena of ethnoorganological research from a systematic point of view requires, therefore, coordination of opinions of the broadest scope of researchers.

The idea of the necessity to formulate as complex a notion of the phenomena of ethnoorganological research as possible could be begun to be developed historically from the first studies in this area and it could be recorded which aspects were noticed and emphasized in the research of instruments. Howerer, this would be a somewhat lengthy detour. For our purposes it should suffice to state that the research of istruments moved from the observation of particularities — the morphology of instruments, the repertoire and the elements of its structure: ambitus, interval frequency, etc., some problems of interpretation — to

the observation of two or more datapoints and their interrelationships, extending the attention also to extramusical phenomena. This brought about the necessity to register data reflecting a greater number of phenomena also in documentation. The new ideas of this orientation spread, however, rather slowly. The professionality of researchers in relation to the new methodological efforts expressed itself to a considerable extent according to their adherence to the individual centers or schools of research. A historical survey of these schools (from the standpoint of their own tradition) was published by Charles Boilès and Jean Jacques Nattiez (1977).

The first remarks about the necessity of a holistic approach to the problems of folk music had been written before the discipline entrusted with its systematic study was even constituted. A. N. Serov wrote already in 1869—1874 (1952, 17): „The science of „folk musical creativity" does not yet exist, but it is already clear that as a branch of a single general scientific discipline concerned with „Science about man" („antropology" in the broad sense), the science of folk musical creativity, i. e. folk song research, this future „musical embryology" is very closely connected with (1) physiology . . ., (2) ethnography (in the broadest sense) . . .; (3) cultural history of nations (once again in the broadest sense) . . .; philology — including the most detailed research of the language and literature of each nation . . . It is, alas, clear to us that because of the insufficient knowledge in all the above sciences, because of their insufficient development, we cannot even being to think about the science of folk songs. We have to limit ourselves to sketches and outlines and to present suggestions and guesses instead of evaluatory conclusions."

The meaning of ethnoorganological research was aptly summed up by Curt Sachs (1929, 3): „Geschichte der Musikinstrumente ist somit in der Hauptsache nich die Erforschung technischer Vervollkommnungen zum Zwecke höherer musikalischer Leistungen; sie wird unversehens zum Bild menschlicher Geistesentwickelung." This formulation already contains the requirement for a broader evidence of phenomena associated with the research of musical instruments.

Among the important characteristics of the development of organology in recent years is the tendency toward a scientific orientation of research and a search for the prerequisites necessary for the fulfillment of this goal. Let us note a general characteristics of science as formulated by Archer (1963, 52): „Science is a particular, special and serially modified set of rules for a mode of sequential thought characteristically addressed to the definition of certain kinds of problems, the processes and techniques of the working-out of which may be considered its methods". Accordingly, each science sees its goal as oriented to the definition of „certain kinds of problems". What does this mean in the case of ethnoorganology? Musical instruments themselves cannot form the topic of research for a whole discipline. We know that there are close links between them and the personality (manufacturer, musician, listener), culture and society in which they appear, but also with the natural environment with regard to the material used for their construction, etc. If we, therefore, want to meet one of the basic conditions for a scientific orientation of ethnoorganological research, we should define the problems to which attention should be paid.

When we want to express our opinion on a detail of some problem we sometimes find that we need to learn more about the whole of which the result is a part. In ethnoorganology, the notion of a whole is often repalced by general formulations. It is, for example, said that musical instruments represent a point of intersection of the material and spiritual phenomena of a given culture. It is not untrue. Many of the ideas of the spiritual world are materialized in a musical instrument in a form in which they can be measured and examined by objective methods, while in their original form they are inaccessible. As far as the general formulation is concerned, however, we feel that it is not sufficient, and that if we are to get closer to the core of what it expresses, we should

1.1.7. Family, work and economical conditions which could influence the formation of the manufacturer's personality.

1.1.8. Other activities of the manufacturer (the whole scope of his extramusical activities).

1.2. The manufacturing process

1.2.1. Conditions and occasions for the creation and/or destruction of instruments (under what conditions they can be made, when and why they are destroyed, etc.)

1.2.2. Knowledge and choice of materials (distinguishing musical and extramusical aspects).
In the manufacture of cast bells in Slovakia we found out that the clay for the manufacture of molds had been taken by the manufacturers from places to which the local tradition had attributed magical properties. Mr. Mishra from Madras called our attention to an old Indian tradition, according to which, for example, a tree, from which a musical instrument was to be made, had been selected in advance when young and people had been preparing it for its future use by playing and dancing to it.

1.2.3. Technology of production, tools, skills and documentation of individual manufacturing procedures. At present we are not able to record or evaluate many of these manufacturing characteristics and that is why we seem it useful to use film documentation in this context. A similar approach was proposed by Feld (1976, 295): „In sum, doing ethnomusicology with film is part and parcel of doing better ethnomusicology. By using film in planned programs of research we can avail ourselves of better data modes, better methodologies of elicitation, and testable modes of analysis." Very good results of this type of documentation were attained by Wissenschaftlichen Film, Göttingen. Let us mention as an example the films about bagpipes and Panpipes in Romania (F. Simon; G. Habenicht 1974 a, b).

1.2.4. Decoration and artistic work.

1.2.5. Inscription.
More recent instruments in Slovakia have often been inscripted with the name of the manufacturer (or his initials), the locality and the year of manufacture.

1.2.6. Tuning and acoustical parameters of the instrument.

1.3. The instrument as a final product of the manufacturer's activity.

1.3.1. Extramusical factors in the manufacture of instruments (the role of general standards of a culture, manifested in magic, symbols, etc.)
In this connection we should remember the work of E. Emsheimer Zur Ideologie der Lappischen Trommeln (1964). The important word in the title as well as in the method of the book is „ideology" which integrates numerous extramusical characteristics with the instrument, without which it could not be understood. For example, the drums of the North American Indians do not provide in their construction any stimuli for their more elaborate classification, but when we take into account their decoration, a whole scale of opportunities emerges to classify them according to their occasions of use.

1.3.2. Morphology is the most developed out of all the aspects of documenting musical instruments. A shortcoming of the existing approaches is that the extramusical aspects, or the meaning of individual parts, is not always recorded in the accompanying documentation, and characteristics resulting from the role of these elements in the overall composition of the instrument may escape us.

1.3.3. Complementary nature of the instrument with others in a given environment. If it is true, as we assume, that the function of instruments in the traditional enviroment has been understood holistically, as an organic part of the culture as a whole, the instruments have also been created or improved (modified) according to this principle. Most likely they formed a complementarity

with the existing instruments or with the extramusical aspects of the local culture.

1.3.4. Repairs. When a musical instrument is damaged by use or by an improper way of storing, demands arise for its repair. In the research of Fujara we recorded frequent repairs of the older instruments. From the character of the work itself it has been clear that the repairs were often done by non-musical professionals — e. g. by tinkers. It is possible that instruments with a magical function required special attention during repaires and also acts of a ritual nature.

1.3.5. The overall character of the instrument. Prof. Claudie Marcel-Duboi has called our attention to the „esprit" of instruments. Each instrument in its material complex reflects important characteristics of its creator. We can discern from it the attention and concentration paid to the manufacture of individual parts, the emphasis attached to the musical, or, on the contrary, the artistic aspect of the instrument, etc. Researchers who have made a closer study of the problems of the manufacture of individual types of instruments are able to distinguish their cultural characteristics from the personal ones and some are even able to identify the manufacturer or characterize his personality.

2. Interpreter, interpretation, music

2.1. Personality of the interpreter

2.1.1. Anthropological characteristics of the interpreter

2.1.2. Psychophysiological characteristics of the personality of the interpreter. An apt formulation of this problem was presented by Doris Stockmann (1966, 215): „... Musik repräsentiert in hohem Masse eine Subjekt-Objekt-Beziehung, deren physikalisch-akustische Realsicht erst im Hinblick auf den Menschen sinvoll, d. h. in vollem Umfang existend wird. Dem gesamten Phänomen Musik sind also gewisse subjekt-Züge immanent, die nicht weniger wirklich sind als die physikalisch-akustischen, nur dass sie eine ander Stufe der Realität darstellen."

2.1.3. Heredity of the personality investigated. Tolia Nikiprowetzky (1962) mentioned remarkable characteristics of the griots of Senegal who represent a hereditary closed profession associated with the use of musical instruments.

2.1.4. General and special dispositions of the personality for performing on a given instrument.

2.1.5. Musical ability of the interpreter, possibly including also his response to various musical genres and styles. Some problems of this kind were already paid attention to by scholars (Brandl, 1981).

2.1.6. Education and specialized training of the interpreter.

2.1.7. Family, work, economical conditions and other characteristics which could influence the formation of the interpreter's personality. In our research in Slovakia we found out, for example, that the interpreters, as a rule, practised playing fujara in youth till the time of their marriage. Then they concentrated on securing the material welfare of their families and returned again to playing the instrument after they retired.

2.1.8. Other activities of the interpreter.

2.2. The relationship between the interpretation, culture and extramusical phenomena.

2.2.1. Motoric behavior during interpretation. The basic findings regarding this question were published by Mauss (1973). Some of the problems in relation to music were elaborated by Bielawski (1979). From the methodological point of view, we could once again emphasize the importance of film for the documentation of these questions.

2.2.2. Playing techniques and their relationship to the interpretational practice of the environment (including the exploitation of the musical and acoustical potencial of the instrument by the interpreter).

2.2.3. Relation of the interpreter to the instrument, its storage, treatment, transport, etc. We know that

instruments have individual properties as far as the playing techniques, timbre and other qualities are concerned and that interpreters select their instruments according to these qualites. In our study of fujara we found that older interpreters preferred instruments with a „damped" tone, while younger interpreters played instruments whose tone had a full, almost metallic quality. The different opinions about the ideal timbre in this case were not related to age, but rather to a loosening in the traditional standards.

2.2.4. Distinction of whether the interpreter plays for himself or for others. Kaemer (1980, 64—65) lists five possibilities in this respect:

„The first type of music complex is **individualistic,** composed of musical events that take place because of the motivation of the performer himself.

The second type is the **communal** music complex. This includes music events involving several people, all of whom are actively taking part in the event, with little distinction between the role of performer and that of audience.

A **contractual** music complex involves sets of musical events characterized by short term arrangements between a performer and an agent who is also part of the audience.

The **sponsored** music complex is the fourth type. It is similar to the contractual except that the arrangement is for an extended period of time, and the musicians receive compensation for the time they spend in service and not for each individual event, or musical composition they produce.

The fifth type of music complex is **commercial,** characterized by the activities of an agent who serves as an intermediary between the musician and the audience."

2.2.5. Further distinction: solo or group playing. There are numerous problems requiring attention in the group playing of instruments. We want to emphasize the research into the personality of the leader — conductor: in what way he gives signals to the other players, to what extent his personal opinion affects the overall effect of a composition, etc.

2.2.6. The role of the general cultural norms of a culture in the interpretation (use of symbols, magical links, etc.) forms one of the most important topics of research. The essential character of these studies was underlined by J. J. Kwabena Nketia (1966, 34) in these words: „There is, however, a growing awareness of the insufficiency of stylistic studies done in isolation without regard to other problems raised by the practice of music, for music does not occur in a vacuum. It occurs in a cultural context and may, therefore, be influenced not only by artistic considerations, but also by social, religious, economic, or political considerations . . ." Blacking (1971, 34) suggested how these complex structures of a culture could be transformed into musical structures: „The common factor is therefore the experience of the individual in society. If the function, structure, and value of music can all be related to patterns of individual and social experience, we have the groundwork for a theory of music-making that can be applied universally." Many other authors in making their research contributed numerous stimuli for the specification of these suggestions. Let us remember at least the work of Claudie Marcel-Dubois and Marie Marguerite Pichonnet-Andral (1975) and Julijan Strajnar (1981). They outline many aspects of the relationships between musical and non-musical phenomena. They imply that it is not enough for an interpreter to learn to play well, but that it is equally important that he organically combines and unites this ability with the cultural demands of his environment. An apt remark on the ties between musical and non-musical structures was written by Kenneth A. Gourlay (1981): „There is **no** song structure **and** social structure, only people who sing and the same people who live in a particular social

formation. Song structure exists **within** social structure, or social structure is that within which song exists.

2.2.7. Questions related to the space in which the interpreter plays and to his position within it should contribute information about the relatedness of a particular culture with a cosmological concept, or perhaps about its preference of certain objects from the viewpoint of orientation in space.

2.2.8. The clothes worn by the interpreter and decoration of his instrument according to the occasion may be related to color symbolics or to the shape of decorations which could in turn be associated with a particular instrument.

2.3. Music as the end result of the interpreter's activity

2.3.1. Repertoire — its structure, length, etc. forms a basis for further analysis. If we do not obtain representative data about the way in which tunes are linked, or follow upon one another in a performance of some length, or obtain only some melodic and structural models (appropriate for the occasion that we have witnessed personally, for example) the results of our research may be distorted.

2.3.2. Style and manner of interpretation specify the above problem area. The topics for research are very broad, they include, for example, the problems of tradition vs. innovation, imitations of a teacher's style, or that of other — already deceased — musicians, the examination of the relationship between the vocal and instrumental models of a melody, etc. The analysis of the verbal content of songs can produce remarkable results, because the structure of the songs can have different dynamics depending on the type of instrument.

2.3.3. Research into musical forms and their structure (ambit, meter, rhythm, intervals, dynamics, agogics, phrasing, decorations, etc.) requires that specific requirements necessary for their proper treatment are defined already at the stage of data preparation. Some of these were published by Feld (1984, 385 — Form and Performance). A special place among these questions is occupied by the process of variations. Recently, the methodology of research into these problems has been much advanced — let us rember, for example, two studies from the journal Culture musicali (Giannattasio, Lortat-Jacob, 1982; Giurati, 1982). It should be useful to apply the stimuli resulting from the theoretical level of thinking in the practical preparation of data.

2.3.4. Theory of music. Remarkable questions and suggestions for research in this field were published by Feld (1984, 387).

3. Listener, occasion, culture

3.1. Personality of the listener — or listeners — should be examined by sociological methods, since the requirements of representativity usually demand that large numbers of subjects be investigated. This in turn demands a reduction in the number of questions in comparison with the preceding contexts. It is assumed that studies of listener should be linked with the home locality of manufacturers and interpreters and that they should complete the complex of their links with the environment.

3.1.1. Social structure characteristics — sex, age, religious denominantion, education, family, profession, economical conditions, etc.

3.1.2. Competence. The term for this problem area has been adopted from Feld (1984, 36) who also lists a whole group of specific questions in this respect. Their number could possibly be further expanded, namely in connection with musical education.

3.1.3. Preference for musical genres and styles should be adapted from the musical viewpoint to the specific cultural conditions of a given locality.

3.1.4. In examining the interest in musical instruments, we can distinguish active and passive interest, the relationship to musical instruments among the members of one's own family or kin, the knowledge of the existence of manufactuerers and/or interpreters in one's own locality, or its close neighbourhood, etc.

3.1.5. Other activities of listeners can suggest preferences for individual artistic expressions in a given locality and for other areas of interest. In an environment with a strong influence of „consumer culture", a global characteristic could result from these data — i. e. whether a tendency to creativity or to passivity prevails.

3.2. Instrumental music and its cultural context. This problem area can be specified by question presented by Feld (1984, 387):

3.2.1. „What resources does the environment provide? How are they exploited? What relationships exist between resources, exploitation, and the material means and social occasions for perfomance?

3.2.2. Are there co-evolutionary patterns, ecological and aesthetic, linking the environment and sound patterns, material, situations?

3.2.3. What are the visual-auditory-sensate relationships between people and environment, and how is its pattern related to expressive means and ends?

3.2.4. What myths or models scaffold the perception of the environment? Are these related or complementary to conception of person, society, expressive resources?

3.2.5. What mystical or cosmological associations with the environment support, contradict, or otherwise relate to the socioeconomic context of musical beliefs or occasions?"

3.3. Instruments and instrumental music as mirrored by culture

3.3.1. Social status and evaluation of musicians and manufacturers in the given culture reflect the attitudes of the whole cultural community towards questions of musical activity. Problems of this kind were analyzed, for example by Alan P. Meriam (1979) and Schéhérezade Quassim Hassan (1980).

3.3.2. Terminology of instruments and musical interpretation reveals important data in its multitude of alternative terms and links between the individual terms and the meaning of other words in a given language. Such observations are particularly valuable when supplemented by the research of historical sources (Szydłowska-Ceglowa, 1977).

3.3.3. Reflection of instruments in other artistic forms of expression describes their „cultural context" and originates when the existing instruments are transformed into another artistic form of expression. E. g. the shape and number of parts in pictures of bagpipes, onomatopoeic words in the imitation of their sound, in song lyrics, proverbs, etc. Examples of such material were published, among others, by K. Dygacz-Nagy (1981), J. Kubik (1981), A. Kopoczek (1981) and K. Turek (1981).

3.3.4. Questions of the distribution and acculturation of instruments and instrumental music are related to the qeustions of causes, conditions and prerequisites for their acceptance. These question have been relatively neglected with regard to smaller regions and localities. Recently, a number of excellent studies have been published in synthetic monographs on individual instruments which further stimulate this type of research. In connection with bagpipes, let us remember, for example, the work of Baines (1960), Van der Meer (1969), Leydi (1979) and the volumes edited by de Maeyer (1976, 1978).

3.3.5. Philosophy and level of knowledge of the given culture in relation to instruments and instrumental music can be studied the viewpoint of the formation of prerequisites for the occurrence of individual types of instruments. However, as suggested by Zemp (1971), the opposite question, i. e. how instruments affected philosophy and knowledge, can also be asked. It is an open

question. At the present time, the state of its elaboration does not allow a more detailed specification.

3.3.6. The acquisition of data for the evaluation of traditional musical instruments for purposes of documentation requires a definition of the role of the researcher's personality. Since many aspects and parameters in different categories (aesthetic, functional) can be accented in the evaluation, we have to expect a broad range of questions. Stimulating suggestions of specific questions were published by Feld (1984, 387—8).

Referring back to the remarks contained in the introduction, we want to emphasize that we do not consider these suggestions for mapping the individual areas of ethnoorganological research as a closed matter. We wanted to describe, above all, our own experience from the research of Slovak folk musical instruments, supplemented by the observations of other researchers that seemed to us important from the viewpoint of our own observations in the field. The classification based on the final products — instrument, music, culture — has been suggested to make us think more thorouglhy and to observe in more detail all the circumstances associated with these independent types of research outputs. We are aware that other ways of classifying the same topics, but accenting other links and relationships could inspire the discovery of other facts important for ethnoorganological research. The creation of a reasonable picture of the structure of the whole is probably the most important taks in solving this problem.

We started our considerations from the relationship between documentation and the needs of ethnoorganological research. We did not mention one reason that gives priority to solving the problems of documentation in our activities. The object of our research is changing in front of our eyes to such an extent that sometimes it is not possible to speak anymore about an acculturation process, but rather about a nivelization of the remnants of important cultures without our having sufficient meaningful data about them. Apart from economical depressions and difficulties, or military interventions, this situation is also caused by the realization of the projects of the scientific-technological revolution. It is regrettable that plans for the most extensive changes in the way of life on Earth do not so far have analogous counterparts in the form of plans for the preservation of the cultural heritage of history. We cannot resign ourselves to this state unless we want to understand our scientific work as sterile lecture-room matter. We know that when a culture perishes, the whole mankind suffers an irrepairable loss. That is why we should concentrate our efforts on the questions of preservation of facts for a possible future reconstruction of the spiritual values these cultures have represented.

References cited

Archer, W. K., 1966: A Quodlibet for Saraswathi: Some observations on the possibilities and limitations of Scientific Methods applied to the study of Artistic Values in Traditional Music. In: Artistic Values in Traditional Music. International Institute for Comparative Music Studies and Documentation, Berlin, 49 - 93.

Baines, A., 1960: Bagpipes. Oxford.

Bielawski, L., 1979: Instrumentalmusik als Transformation der Menschlichen Bewegung. Mensch-Instrument-Musik. In: Studia instrumentorum musicae popularis VI. Musikhistoriska Museet, Stockholm, 27 - 32.

Blacking, J., 1971: The Value of Music in Human Experience. In: Yearbook of the International Folk Music Council, Vol. 1., 33 - 71.

Boilès, Ch.; Nattiez, J.-J., 1977: Petit histoire critique de l'ethnomusicologie. In: Music en jeu 28, 26 - 53.

Brandl, R. M., 1981: Zur pragmatischen Dimension des musikalischen Hörens: Individualstill und Instrumentalstill eines griechischen Geigers. In: Studia instrumentorum musicae popularis VII. Musikhistoriska Museet, Stockholm, 86 - 94.

Dournon, G., 1981: Guide for the collection of traditional musical instruments. The Unesco Press, Paris.

Dygacz-Nagy, K., 1981: Instrumenty muzyczne w swietle polskich zagadek ludowych. In: Polskie instrumenty lu-

dowe. Studia folklorystyczne. Universytet Śląski, Katowice, 93 - 115.

Emsheimer, E. (Ed), 1976: Studia instrumentorum musicae popularis IV. Bericht über die 4. Internationale Arbeitstagung der Study Group of Folk Musical Instruments des International Folk Music Council in Balatonalmádi 1973 herausgegeben von Erich Stockmann. Musikhistoriska museet, Stockholm.

Emsheimer, E., 1964: Zur Ideologie der lappischen Zaubertrommel. In: Studia ethnomusicologica euroasiatica. Musikhistoriska Museet, Stockholm.

Feld, S., 1976: Ethnomusicology and Visual Communication. In: Ethnomusicology XX, Nr 2, 293 - 325.

Feld, S., 1984: Sound Structure as Social Structure. In: Ethnomusicology XXVIII, Nr 3, 383 - 409.

Giannattasio, F.; Lortat-Jacob, B., 1982: Modalità d'improvvisazione nella musica Sarda: due modelli. In: Culture musicali I, Nr 1, 3 - 35.

Giuriati, G., 1982: Un procedimento compositivo caleidoscopico: la tarantella di Montemaracco. In: Culture musicali I, Nr 2, 19 - 72.

Gourlay, K. A., 1984: Responses to Feld and Roseman. In: Ethnomusicology XXVIII, Nr 3, 456 - 458.

Gourlay, K. A., 1978: Towards a Reassessment of the Ethnomusicologist's Role in Research. In: Ethnomusicology XXII, Nr 1, 1 - 36.

Hassan, Sh. Q., 1980: Les Instruments de Musique en Irak et leur rôle dans la société traditionelle. Mouton, Paris.

Kaemmer, J. E., 1980: Between the event and the tradition. A New Look at Music in Sociocultural Systems. In: Ethnomusicology XXIV, Nº 1, 61 - 74.

Kopoczek, A., 1981: Instrumenty muzyczne w heraldyce i sfragistyce polskiej w okresie feudalismu. In: Polskie instrumenty ludowe, Studia folklorystyczne. Universytet Śląski, Katowice, 58 - 82.

Kubik, J., 1981: Przysłowia i wyrażenia przysłowiowe o instrumentach dętych. In: Polskie instrumenty ludowe. Studia folklorystyczne. Universytet Śląski, Katowice, 116 - 143.

Leydi, R., 1979: La zampogna in Europa. Como.

Mačák, I., 1981: Hersteller und Spieler von Volksmusikinstrumenten - Zur Methode der Forschungsdokumentation. In: Studia instrumentorum musicae popularis VII. Musikhistoriska Museet, Stockholm, 65 - 69.

Maeyer, R. de (Ed), 1976: The Brussels Musem of Musical Instruments. Bulletin VI. The Bagpipes in Europe (part I).

Maeyer, R. de (Ed), 1978: The Brussels Museum of Musical Instruments. Bulletin VIII. The Bagpipes in Europe (part II).

Marcel-Dubois, C.; Pichonnet-Andral, M.-M., 1975: Musique et phénomènes paramusicaux. Extrait de l'Aubrac, Tom V, Ethnologie contemporaine III. Centre National de la Recherche Scièntific, Paris.

Mauss, M., 1973: Sposoby posługiwania się ciałem. In: Sociologia i antropologia (Sociologie et antropologie). Państwowe wydawnictwo naukowe, Warszawa, 531 - 566.

Meer, J. H. van der, 1969: Beitrag zur Typologie der westeuropäischen Sackpfeifen. In: Studia instrumentorum musicae popularis I. Musikhistoriska Museet, Stockholm, 98 - 112.

Meriam, A. P., 1979: Basongye Musicians and Institutionalized Social Deviance. In: Yearbook of the IFMC 11, 1 - 26.

Moeck, H. A., 1954: Die Skandinavischen Kernspaltflöten in Vorzeit und Tradition der Folklore. In: Svensk Tidskrift för Musikforskning, 55 - 83.

Nikiprowetzky, T., 1962: Les Griots du Senegal et leurs instruments. Communication présentée au XVè Congrès de Conseil International de la Musique Populaire (Gottwaldov).

Nketia, J. K. K., 1966: The Dimension of Musical Studies. In: Artistic Value in Traditional Music. International Institute for Comparative Music Studies and Documentation, Berlin, 34 - 48.

Sachs, C., 1929: Geist und Werden der Musikinstrumente. Verlag von Dieter Reimer in Berlin.

Seeger, Ch., 1970: Toward a Unitary Filed Theory for Musicology. In: Selected Reports I, Nr 3, 171 - 210.

Serov, A. N., 1952: Russkaya narodnaya pesnya kak predmet nauki. Muzgiz, Moskva.

Simon, F.; Habenicht, G., 1974 a: Film E 1665. Südost-Europa, Rumänien. Spielen auf einer Sackpfeife in Alunis. Institut für den Wissenschaftlichen Film, Göttingen.

Simon, F.; Habenicht, G., 1974 b: Film E 1784. Südost-Europa, Rumänien. Spielen auf einer Hirtenflöte in Vaideeni. Institut für den Wissenschaftlichen Film, Göttingen.

Stockmann, D., 1966: Das Problem der Transkription in der musikethnologischen Forschung. In: Deutsches Jahrbuch für Volkskunde 12, 207 - 242.

Strajnar, J., 1981: Zur Frage der Persönlichkeit des Volksmusikanten in Slowenien. In: Studia instrumentorum musicae popularis VII. Musikhistoriska Museet, Stockholm, 37 - 39.

Szydłowska-Ceglowa, B., 1977: Staropolskie nazewnictwo instrumentów muzycznych. Polska Akademia Nauk. Instytut Badań Literackich, Wroclaw.

Turek, K., 1981: Instrumenty muzyczne w gornośląskiej prozie i pieśni ludowej XIX wieku. In: Polskie instrumenty ludowe. Studia folklorystyczne. Universytet Śląski, Katowice, 83 - 92.

Zemp, H., 1971: Musique Dan, la musique dans la pensée et la vie sociale d'une société africaine. Mouton, Paris - la Haye.

MARIANNE BRÖCKER, BONN

Documentation of Traditional Musical Instrument used Today

Organology as a branch of musicology is still a young field. After the first important studies by Curt Sachs, scientists had investigated almost exclusively the European art music instruments and only after World War Two the research in folk music instruments started. During the last 30 years, an increasing number of single studies from different points of view came out, and in the course of the last 10—15 years the interest of an expanding public in folk music and non-European music has been advanced through transmissions over radio and TV stations. Today it is almost impossible to understand why it took such a long time for ethnic instruments to excite the interest of researchers, particularly when we realize the fact that their existence and development has very often been the first step to later art music instruments.

For a long time now, cooperation of different branches of knowledge have been required and the ethno-organology as a branch of ethnomusicology has shown to be particularly adapted to cooperation of several fields in an effort to apprehend all the interrelationships between various aspects of the environment, which are decisive for the existence of a proper cultural phenomenon or object. In order to study an instrument it is necessary to investigate the physical and acoustical aspects, as well as the historical, economical, social and psychological aspects of the instruments, the manufacturer, the music, the player and the cultural context. It is therefore not surprising that, with the beginning of detailed and intensive research in ethnic instruments, numerous problems of a different nature clearly occurred. In particular, for the instruments which are not, or not only, used in the art music it turned out with an ever increasing clarity that it was not sufficient to investigate only the object proper if we want to learn not only single facts about the insturment, but its function and status within a society as well. The important role of extramusical facts is shown by the discussion about the definition of an art music instrument and a folk music instrument. Even considering only the European instruments, a clear-cut separation of the art music instruments from those of folk music is not possible. Therefore the study of an instrument as a music-making object does not show anything else than that it is an acoustical object. Only some clarification of other musical and extramusical questions will allow for the classification of an instrument as art or folk music instrument. The broader term „ethnic instrument" indicates today all instruments which are played out of the context of occidental art music. However, we have to realize that even a violin bought in a shop, but played by a fiddler, or the accordion which is generally manufactured in a factory, but which replaced the older bagpipe in many countries, have to be considered as ethnic instruments. If we do not accept this we cannot study the real folk music of occidental countries at all. However, it is not so important by what name we call our subject of research, but it is really essential that we study not only the instrument, but treat it as an im-

portant part of a culture, reflecting both the musical culture and the function of music and instruments within a society. Music is generally an essential part of cultural life. It is, therefore, necessary to study all the musical and extramusical relationships to see the single object in the context of its own culture. Particularly in the Western countries, where musical life is at present strictly divided into several categories and where a large proportion of musical phenomena show a kind of international tendency, and where the function of folk music and folk music instruments has radically changed, it is absolutely necessary to collect as much information as possible about an instrument and its present and past environment. Only in this way we can prove it to be a part of living reality.

Hitherto complete documentation on ethnic instruments has been rare. Very often researchers limit themselves to single aspects because the necessary cooperation with colleagues in other branches of knowledge is not possible. But also a sum of single studies about an instrument can in the end produce good documentation, although the standard publications with drawings, photographs and transcriptions of music played on the instrument are clear only to a specialist, but not to the interested amateur. For the latter it is more fruitful to visit a publice collection of instruments, to see the instrument, to obtain visually the essential information about the instrument and its culture, possibly to play it or at least to hear its sound. This kind of comprehensive documentation should be a feature of any collection of ethnic instruments.

Since a museum of cultural history is, in its own view, a place for the collection and storage of objective effects of a culture, a museum of instruments is therefore a collection of objects related to cultural history. People often say that objects of effects are evident without any explication. If the effects are musical instruments, it can be shown quite clearly how false this opinion is. Like all other cultural objects, the instruments in a museum are removed from their spatial, temporal and human relationships and provide no particulars about their living reality. Therefore, each museum of cultural objects has not only the duty to collect and preserve, but also the obligation to study the cultural relationships of an instrument so that these dead objects can be „made to speak". Musical instruments present special problems because measurable data provide information only about the object, but not about its employment or about the range in which it had been actually used, and not even about the sound if the instrument is known to us but played by musicians of another culture. For example, the European violin played by a Greek lira player has a totally different sound from what we are used to hear. Therefore, it is often not even sufficient to present an ethnic instrument by playing it oneself, for even instruments whose sound is not affected directly by the player can give a totally wrong sound impression when played by a foreigner.

The problems of documentation have been well known for some time, but during the last decades still more questions appeared. In the case of non-European instruments, in a culture not yet influenced from outside, the problems are well known and can be eliminated. However, sometimes it still happens that museums authorize scientists who are not trained in ethnomusicology to buy instruments for the museum. Or they sometimes buy instruments offered by persons who have no exact data about the instrument. In this way, the museum enlarges its collection but the obtained data are rarely sufficient for a good documentation. It is almost the same problem for the museum as with instruments brought into the museum a long time ago. It is well known that documentation of old ethnic instruments inside a museum is very difficult, because these objects were collected and bought in the past almost always without any additional information, so that very often comparison is the only possible means of documentation. The acquisition of new instruments by untrained personnel cannot be, however, always evoided. That is why, some collections of ethnic instruments worked out a field questionnaire

to help these persons obtain at least the minimum data.

As in the case of art music instruments, restoration is a problem also for ethnic instruments, especially as regards its meaning and purpose. Should an instrument be restored so that it could be played (but who is playing it then?), or should it be preserved in its present condition? Another question is whether former restorations, often made by laymen and sometimes even harmful, should be removed or not. These decisions probably have to be made for a specific instrument and for it alone. This also applies to new instruments. If a documentation contains all the important data about an instrument, it is the proper documentation for this instrument alone. This means that data have a different importance depending on the instrument. It is, for example an important distinction in documentation whether an instrument has been made by children, or for children. Only if the important points for each instrument are included in the documentation, and emphasized, will an amateur visitor to a museum be able to transform an object exhibited in a vacuum, into an essential and comprehensible part of a culture.

Instruments of relatively stable cultures present enough problems, but more are offered by cultures with acculturation processes, and still more difficulties can be seen in many European countries where the possibilities of travels and the influence of radio and TV have brought about knowledge of ethnic instruments never known before. In many cases this has led to a kind of international exchange of instruments and other foreign cultural elements. In particular the instruments used today in some parts of European folk music show quite clearly the new and different problems associated with them. I would like to illustrate this on two examples showing, in particular, the important role of the manufacturer, manufacture and the product, the instrument.

In many European countries folk music proper had disappeared from daily life and was cultivated only by amateur groups who presented on stage to a public a certain local color in music and dance. Almost everywhere in Western Europe the old folk music instruments were replaced by the accordion. The impression of these groups on the public was that of a show. This was the situation in many Western countries. However, more than ten years ago, a reawakening of traditional music began, particularly among young people. Numerous groups of young musicians came into existence, who first imitated the music of foreign groups, but soon attempted to find and play the folk music of their own country or region (e. g. songs in the local dialect). When the traditional music of their region had already disappeared, they tried to revive it by asking old people, or studying written sources such as collections of songs and dances. At first these young people played instruments of different types and foreign origin. Very often, for the traditional music of their region, they used instruments that had not been known there before, or they took up exotic instruments which can be bought today in the stores of big towns in order to give their music more variety. Other groups of young musicians, however, whose number increased with time, tried to revive the folk music instruments which had been spread in the past all over Europe and which were still played in the last decades, though only in very few regions. A good example of these slowly perishing instruments are the hurdy-gurdy and the bagpipe. In the regions where these instruments were still played and, more important, produced, the demand for instruments, as well as for training in playing them, rapidly increased. Even outside these traditional regions people started to assemble hurdy-gurdies and bagpipes. The young musicians became also manufacturers. At first, they concentrated mainly on the instruments in museums from which they took as exact measurements as possible to make replicas. Sometimes, if they could not find the instrument in the museums of their own or a neighboring region, they tried to make replicas according to pictures, engravings or woodcuts.

During the last years, the situation with regard to these instruments changed rapidly. Until then they

were still distributed locally and produced by old manufacturers and dying out in most parts of Europe. Since 1976, a meeting is held once a year of musicians and manufacturers of drone instruments in Saint-Chartier (Indre), a small village in the Berry region of Central France. Like the surrounding French regions, Berry has an unbroken tradition in making hurdy-gurdies and in playing, individually or, since the end of the 19th century, often in amateur music groups. Meetings of local musicians and groups playing these instruments have existed for a very long time, but the important thing about the first and the following international meetings has been an exhibition of manufacturers producing hurdy-gurdies and/or bagpipes. The growing interest in building and playing these instruments is documented by the number of exhibitors and their national origin. In 1976, the first year of the exhibition, 15 manufacturers, 14 traditional French makers and one young German, displayed their goods. Later, the number of producers increased and also special makers of details, such as iron axles for the wheel or sculptured heads at the end of the pegboxes of many hurdy-gurdies appeared. In 1983, 76 exhibitors, 58 French, one each from Italy, Ireland, Switzerland and Spain, two from the Netherlands, three each from Belgium and Great Britian and six from the FRG showed their work. This meeting of manufacturers is so far the only possibility for the makers of drone instruments to become familiar with each other, to exchange personal experience and to learn about the innovations of their colleagues. At the same time, the interested visitor can stay informed and compare the different instruments and their manufacture. A very interesting development can be seen in connection with these meetings. In the beginning, instruments made by traditional makers according to models which had existed for a long time, predominated. Next to them were instruments of the younger makers, which were generally replicas of instruments in museums. Later, some details which did not alter the exterior of the instruments but which could be essential to sound, tuning or maintenance of the instrument, changed. This happened mainly because the younger makers were more willing to experiment also with various modern materials, such as plastic, or with modern techniques, than the older generation. A good example of this is the most vulnerable part of the hurdy-gurdy, namely the wheel. In former times, it was made as a whole out of one piece of wood. When the weather changed, the wood started to work so that soon the wheel was no longer perfectly round. Therefore, some young manufacturers developed a method of gluing together, with a modern chemical adhesive, a number of very thin plates of plywood with the graining of individual plates in different directions. Out of this compact plate they cut the wheel and only the surface of the wheel where the strings are touching, they covered with a very thin piece of plain wood to get a round and smooth surface. In this manner, the wheel remains perfectly round. The method has been later accepted by the older manufacturers, too. Beside this already standard method of making a wheel there exist wheels made purely of synthetic material which are hollow inside. Of course, these wheels are absolutely insensitive to changes in weather, or other external influences. The external appearance and decorations have remained in most cases traditional and influenced by the old models. Every year, however, innovations appear which are developed by the manufacturers within the unchanging frame of the instrument as a whole. Gradually, the young makers began to develop their own style and their own forms and decorations. Today a balance exists between the instruments built on the traditional models and a variety of more modern models which only follow the example of the ancient traditional instruments, or even do not follow any historical pattern at all. I want to emphasize that at all the meetings the exhibited instruments represented excellent examples of trade handicraft. I would like to add that many of these producers, even of the young generation, are already professional or semi-professional makers of musical instruments and that many of them have standing orders for three or four years.

If somebody would start now to document all the

important data about the construction of hurdy-gurdies and bagpipes in Western Europe, he would get only at half of the truth were he to examine only the traditional manufacturers and not consider the younger makers too, who have indeed already influenced the traditional producers (these would hardly be eager to inform you that they learned from the younger generation. This is my personal experience with them).

This development shows that some of the problems which are very important for the older traditional makers are of no importance for the young generation of manufacturers, and vice versa. I would like to demonstrate this on the list of desirable data for a documentation about the manufacturer, manufacture and instrument, laid down by Ivan Mačák.

It should be observed beforehand, that the arrangement proposed by Ivan Mačák, considering first the manufacturer and last the instrument, is very suitable especially in this case, because in this succession of tradition and innovation, it is the manufacturer and the instrument as an object that represent the most important point. In the following commentary on the list I always refer to the young and to the traditional manufacturers of hurdy-gurdies and bagpipes as I know them, because for all these years I have participated in their meetings.

— From our point of view as Europeans, the investigation of antropological characteristics is more important in non-European makers, but not so essential in a manufacturer of West-European origin. — Also the psychophysiological characteristics are probably less significant in our civilization for the traditional makers, but they can be of more importance to the young producers, for with these data it is possible to determine in part the extramusical motivation which led a young manufacturer to construct instruments. — For a traditional manufacturer, question of the tradition of manufacture, of his family and of the local neighborhood, is one of crucial importance; for the young maker, however, it is generally of no importance. If he is from a family in which music forms an important part of life this music will be very different from that played on drone instruments. I know of very few cases when a young man, now manufacturer of instruments of this kind, has grown up in a family and neighborhood with players of hurdy-gurdies, or bagpipes. — A similar result is shown in the disposition towards manufacture which is very different in a traditional and a young instrument maker. Here, too, a traditional manufacturer has had a different motivation — family or local tradition — to build instruments, than the young one who is an outsider in most of the cases. — Also the musical abilities are different; old manufacturers are generally also good players on the instruments they construct, having generally started by plaing an instrument of this kind, whereas the young manufacturers often cannot really play. They are able to tune their instruments and to play well enough for testing them, but as a rule, they have not started by playing these instruments in particular. Very often they are consequently not really good players on the instruments they construct. This is a very important point because most of the young manufacturers approached the construction and the playing of these instruments from totaily different directions. Many of them had been active musicians before, but they played a pop- or rock-music instrument and very often jazz. This fact is especially important for the research of the background of these manufacturers, for these types of music generally use many various instruments which can be played in a wide range, in all the keys and with a great virtuosity. And especially for these musicians it was more satisfactory to voluntarily reduce their musical possibilities and construct instruments, the playable keys and sound of which are determined by drones or drone strings and the compass is small, depending on the fingerholes of the bagpipe, or the keys of the instrument as an object that represent the hurdy-gurdy. The limitation of the sound and range is no doubt extremely attractive and the fact that so many young people play and/or construct drone instruments proves that even young people who can listen to any kind of music every day are still feeling

the attraction of these sounds. — Another important point is the fact that the older manufacturers have generally had a special training under another older maker, whereas the young producers have not had any kind of education or apprenticeship in making musical instruments. Almost all of them started without any preliminary knowledge and they gained the necessary experience only by making more instruments. — When young makers start to build instruments, they depend on their local environment like the older producers, but the background is totally different. The local tradition was decisive for the older makers, but for the young manufacturers the decision came from somewhere else, from their daily situation in their work which they often experienced as unsatisfactory and instead, wanted to produce something they loved. For many young makers who are still working in another profession, the contruction of instruments is their hobby for evenings and weekends, but many already construct instruments professionally, or semi-professionally and earn their living and that of their families by this craft.

— The difference in manufacture between the older and younger manufacturers is not very great; all instruments are, for the most part, handmade. At present, the manufacturers use, besides the traditional materials, also newer ones, but for the purposes of restoration of old instruments it is very important to learn exactly the practice and materials of former times from the traditional manufactures. — Generally, instruments are built on orders, or in advance; in the normal case the manufacturer has one or more playable instruments ready in his workshop. — Extramusical factors of manufacture are chiefly still mostly related to decorations in the traditional manner, like the almost obligatory inlay on the table of the hurdy-gurdy of French origin which formerly consisted of alternating ivory and ebony pieces. Contemporary manufacturers preserve this alternation of colours, but apply a plastic band with alternating black and white pieces of imitation ebony and ivory. Also, they still attach small pieces of mirror or mother-of-pearl to the pipes of some central French types of bagpipes, because it is a traditional decoration, but the possible magic or symbolic meaning of this decoration is unknown to them and even to the older manufacturers. — The materials chosen by young producers vary. On the one hand, they use traditional materials, on the other, they are willing to experiment. — The manufacture is for the most part handmade, except for some details made by other artisans, like the treatment of the skin for the bag of a bagpipe, or the iron axle and handle of the wheel for the hurdy-gurdy. As I have already mentioned, the instruments made by young manufacturers were at first copied after older traditional models, but an increasing number of young makers have found or are finding their own style with regard to both the form of he instrument and the decoration. More and more, they also experiment with new possibilities of, for example, fixing exactly the pitch and tuning, or correcting the wheel; or they try to construct drones which can be tuned to different pitch. In some cases the experiments led the manufacturers to the contruction of electronic hurdy-gurdies. Every innovation represents a start of long and sometimes vehement discussions among the manufacturers; one of their essential points is that the instruments should not lose their specific sound character in spite of all innovations.

Generally speaking, it is evident that the young manufacturers of hurdy-gurdies and bagpipes preserve and continue a tradition which would otherwise disappear, because the old manufacturers are dying out. Hence, it is worth to study these makers and their instruments, if only for this reason. But it is also evident that the questionnaire which has been designed to investigate manufacturers of a long unbroken tradition has to be altered in some essential points. The points in question are the aspects of the young manufacturer as an outsider of the tradition, his environment and his psychological makeup, his motives for the construction of instruments and whether and how he changes details or essential parts of the instrument.

In connection with this folk music movement, the question arises whether such contemporary trends

should be a topic of research. It is necessary to realize that this revival of the traditional musical forms met with so much interest in many West-European countries, that an ever increasing number of young, but also older people have started again to sing, play instruments and dance the old dances. For instance in Belgium, in the GFR, in the Netherlands, and in France courses are organized throughout the year for the repair of instruments, for the manufacture of details such as the reeds of bagpipes, for learning to play an instrument, or to play together on several instruments, or to dance traditional dances. Generally speaking, it is no longer a matter of a small group of insiders, but of very many people. In my opinion, it is our duty to investigate the contemporary trends in folk music, too. Also museums and collections of ethnic instruments should acquire the contemporary instruments to document everything of importance within a folk music movement. Otherwise, they will become „historical" museums.

To sum up, I would like to emphasize that it is absolutely necessary for the documentation of an ethnic instrument to enlarge the scope of research beyond the instrument itself and its existence in music, and to investigate as thoroughly and exactly as possible, its cultural and social environment and background. As the given examples show, a preliminary study into the background, the specific characteristics of the culture and society in which the instrument and its manufacturer exist, should be done prior to a research proper. Only then is it possible to point out the really important details specific to the instrument. And only then can it be avoided that the researcher starts his study with a prejudice which prevents him from considering the essential points in the study of this instrument. The significance of details depends on the background of an instrument and for that reason it may vary. Therefore, the questionnaire for the study has to be variable, too. The same holds also for the problem areas of the musicians, repertoire, interpretation and especially occasions of making music, and listeners.

JULIJAN STRAJNAR, LJUBLJANA

Quelques remarques concernat la documentation des instruments et de la musique instrumentale populaire

La recherche des instruments et de la musique instrumentale populaire a attiré et attire encore l'attention des éthnomusicologues. Je ne chercherai pas à définir encore une fois l'objet des recherches scientifiques des éthnomusicologues — c'est à dire l'instrument populaire — car cela a été fait à plusieurs reprises par des éthnomusicologues bien connus.

La recherche scientifique des instruments et de la musique instrumentale populaire se base sur des données et des sources, par exemple: instruments ou certaines pièces des instruments, archives, documents écrits, fresques, tableaux, pièces iconographiques, pièces archéologiques, citations dans les textes des chansons populaires, tradition orale, photos et films, enregistrement sonore etc. etc. Bien entendu, je n'affirme nullement avoir épuisé toutes les sources possibles qui sont assez nombreuses et très complexes. L'éthnomusicologue étudie les instruments populaires en suivant certains principes de travail qui ont été acceptés (ICTM — Study Group on Folk Musical Instruments) en tenant compte de la terminologie, de l'ergologie et de la technologie, de la technique et des possibilités sonores de l'instrument, du répertoire, de l'emploi, de l'histoire et de la diffusion des instruments. Pour une connaissance plus profonde, pour avoir des études et des résultats plus détaillés de l'instrument et de la musique instrumentale populaire il serait souhaitable de faire plus attention encore (et de recueillir plus de documents et de donnés) à certains aspects, comme par exemple: comment l'instrumentiste joue, pourquoi de telle ou d'une autre manière? Apprendre aussi comment et de qui il a appris à jouer. Peut-être il imite son éventuel „professeur", est-il obligé de jouer exactement les mêmes mélodies de la même manière etc. Il serait intéressant à savoir pourquoi un musicien commence à jouer sur tel instrument, c'est-à-dire le choix est dû à une certaine tradition (de père en fils) ou le choix est casuel? Est-ce-que le musicien est content de la qualité sonore de son instrument ou cherche-t-il à enrichir le son à l'aide de divers processus (corrections techniques, décoratives, magiques etc.) reconnus comme traditionnels dans une certaine région, ou il invente ou emprunte une nouvelle technique? A ne pas oublier non plus la symbolique des sons et des instruments. Nous ne connaissons pas assez bien non plus si tel ou tel musicien préfère un instrument ayant une sonorité plus forte ou au contraire une sonorité plus faible. A ne pas oublier non plus la préférence pour un instrument mélodique ou un instrument d'accompagnement rythmique ou encore un instrument qui ne représente pas de difficulté technique pour en jouer, qui n'exige pas un entrainement continu etc.

Il serait intéressant à savoir pourquoi et à quel but certains instruments forment des ensembles instrumentaux qui peuvent devenir typiques soit pour une région,

soit pour une éthnie. En parlant d'un ensemble d'instrumentistes, nous devrions mieux connaître aussi non seulement la fonction musicale des instruments (mélodie, rythme...) mais aussi qui commence, qui choisit le répertoire, qui dirige les répetitions éventuelles etc. Un ensemble instrumental est composé d'instruments choisis par hasard ou par nécessité (voir la fonction acoustique par ex.) ou bien encore c'est la tradition (depuis quand?) qui impose la composition de l'ensemble instrumental. A ne pas oublier l'influence probable d'autres ensembles connus dans le pays ou à l'étranger et aujourd'hui aussi l'influence de la radio, la télévision, films etc..

Pour le passé (avant les enregistrements sonores) nous avons assez peu de renseignements, nous ne pouvons presque pas connaître le côté sonore de la musique instrumentale populaire, le répertoire et encore moins la technique, le style. Les colectionneurs et les chercheurs ne nous ont laissé presque jamais de notations-partitions. Les musiciens populaires, sauf exception très rare, jouent toujours d'oreille et ne connaissent pas la notation musicale.

Pour avoir une meilleure connaissance de la musique instrumentale il faut étudier (noter, documenter) non seulement la mélodie, le rythme mais aussi par exemple: l'embouchure, l'approche des lèvres contre l'embouchure, le doigté, le coup d'archet, le vibrato, le changement de position etc... Ces „détails" nous permettent de mieux voir et comprendre le style d'un instrumentiste, le style local, régional, d'une éthnie et en même temps aussi le développement d'une mélodie. Dans ma communication à Kazimierz Dolny (1977) parut dans Studia instrumentorum musicae popularis VI, Stockholm 1979, j'ai déjà souligné l'importance d'une meilleure connaissance de la technique et de la pratique, je cite: „En connaissant mieux le côté technique et pratique d'un instrument quelconque, nous pouvons mieux comprendre pourquoi l'instrumentiste joue d'une telle ou d'une autre manière. Ainsi une meilleure connaissance peut nous montrer que beaucoup de choses s'expliquent par le côté technique de l'instrument, quelle sorte de son peut-on en tirer, quelle qualité sonore peut-on obtenir, ce qui est facille, difficile ou impossible à jouer. En plus nous pouvons aussi étudier le rapport, la relation entre la technique instrumentale et la musique populaire." Les appareils électroacoustiques nous permettent, par exemple, de faire la comparaison des sons et de la qualité sonore d'un instrument (ce qui dépend de la facture et de la qualité objective de l'instrument) avec les sons possibles et la qualité sonore que l'instrumentaliste en réalité a employés pour pouvoir ensuite en trouver la rasion. Il se peut qu'une „fausse intonation" est due apparemment à un système tonal, mais il ne faut pas négliger la présence probable d'un défaut acoustique (imperfection dans la facture de l'instrument), un défaut physique de l'instrumentiste (gros doigts par exemple), une méconnaissance ou une technique spéciale employé pour jouer sur tel ou tel instrument (exemple: la position de la main gauche des violonistes qui est „mal placée"). Pour tout instrument il faut donc bien connaître quelle en est la facture, quelle sorte de son on peut jouer et par quel moyen technique on peut les obtenir (embouchure, doigté, coup d'archet...) et de même il faut connaître quelles et comment toutes ces possibilitées techniques on été employées par le musicien populaire-traditionel.

Nous devrions surtout attirer notre attention sur le pourquoi, en trouver les raisons possibles? Quelles sont les conditions naturelles, les raisons sociales, historiques etc., dans l'espace et dans le temps de la vie d'une societé d'un pays, d'une éthnie, pour qu'un phénomène musical (dans notre cas-instruments) qui nous intéresse puisse se produire, évoluer, se transformer ou disparaître. Pour pouvoir trouver des réponses à toutes ces questions il nous faut d'abord avoir une documentation riche et complexe.

Tout en respectant les classifications des instruments qui on été faites jusqu'a nos jours (par exemple celle de Sachs-Hornbostel) je me permets d'en proposer encore une autre. Il ne s'agit pas d'une classification spéciale, plutôt d'une division des instruments en trois groupes que je trouve pratique pour nos études:

I. groupe

Les instruments de simple facture, connus et utilisés plus ou moins dans différentes régions et près de nombreux groupes éthniques. Ces instruments faits en principe d'éléments naturels (bois, écorce, corne, terre etc.) sont des instruments qui par leur formes élémentaires et leurs qualités acoustiques restent toujours les „mêmes", ne subissent pas de grand changement considérable au point de vue technique, sonore et d'emploi.

II. groupe

Les instruments considérés comme „typique", „caractéristique" pour une région ou un groupe éthnique. Ils sont très nombreux et je ne citerai que quelques exemples: les tamburice, instruments soit disant typiques pour les Croates; les sopile (instrument a double anche), typique pour l'Istrie; la gusla, typique pour la Serbie, la Bosnie, le Montenegro etc; la fujara, typique pour Slovaquie etc. etc. Tous ces instruments — la terminologie, la technique du jeu, les possibilités sonores, le répertoire, l'emploi ... — peuvent être et sont considérés comme „typiques", „caractéristiques", „représentatifs", pour une région ou un groupe éthnique.

III. groupe

Dans le troisième groupe nous retrouvons les instruments d'une facture „typisée", connus dans diverses régions et utilisés par divers groupes éthniques. Prenons quelques exemples: la clarinette, l'accordéon, la contrebasse, le violon etc.. La qualité et le timbre du son ainsi que les possibilités sonores de ces instruments dépendent d'abord de l'instrument mais surtout, ce qui me semble le plus important, de l'instrumentiste, du musicien. Le même instrument d'une facture „typisée", ayant simplement les mêmes caractéristiques sonores, employé par des musiciens de différentes régions ou groupes éthniques, peut nous donner une musique bien différente. La manière de faire la musique, la technique employée peuvent devenir typiques pour une région ou un groupe éthnique. Pour ces instruments il faut donc bien connaître le côté musical, la technique du jeu, le style ..., car la facture et la fabrication sont „uniformées". Le musicien exprime avec son instrument „typisé" — l'objet, l'appareil producteur de sons — un certain style de musique, soumis aux lois „non écrites" de la pensée musicale, de l'idée de la musique populaire, consciente ou subconsciente individuelle et collective, d'une époque, dans un milieu social déterminé.

C'est précisément ce troisième groupe d'instruments qui devraient beaucoup plus attirer notre attention. Bien entendu il nous faut d'abord avoir une meilleure documentation, non seulement sonore, photos etc .., mais comprenant aussi (surtout!) tous les „détails" possibles.

Les collections d'instruments de musique populaires sont nombreuses. Ces instruments, fabriqués pour la plupart par des paysans, bergers, des artisans spécialisés ou des manufactures (fabriques) sont trop souvent considérés comme des produits de la „culture matérielle" et traités en tant que tels. Nous retrouvons les instruments primaires et rudimentaires, d'une simple facture, pour arriver aux instruments les plus développés et compliqués. Ils se diffèrent entre eux aussi par leurs formes, ornements, couleurs, emploi, rôle etc ... La documentation concernant les instruments collectionnés dans les musées (même dans ceux qui ont une section éthnomusicologique), si „riche" quelle soit, est encore toujours insuffisante. Pour le passé il est difficile ou impossible d'enrichir la documentation actuelle. Je pense à tous les „détails" qui nous permettraient d'avoir une connaissance plus profonde et complexe et aussi une interprétation valable de la musique instrumentale populaire. Aujourd'hui nous avons, plus ou moins, les moyens techniques, en principe précis et objectifs (enregistrement sonore, vidéo cassette, film atc.) pour recueillir des documents comprenant presque tous les „détails" qui nous intéressent. Il est possible qu'une „accumulation" énorme d'informations puissent nous paraître superflus, peut-être nous ne savons pas encore en tirer tous les avantages et nous ne sommes pas encore capables de les interpréter, mais il me semble nécessaire et indispensable „d'accumuler" toute la documentation possible concernant les instruments et la

musique instrumentale: en fonction des différentes activités festives et quotidiennes, dans les milieux sociaux différents d'un pays, d'une contrée, d'une éthnie.

Il est bien évident que la collaboration et l'aide d'autres branches de la science nous est indispensable ainsi qu'une collaboration encore plus active-créative des éthnomusicologues.

Part Two

Preservation and Processing

FRIEDEMANN HELLWIG, NÜRNBERG

Zur Konservierung und Restaurierung ethnologischer Musikinstrumente

Einleitung

Sicherlich ist es eine zutreffende Annahme, dass weltweit die Bestände von ethnologischen Musikinstrumenten wesentlich umfangreicher als die der Kunstmusikinstrumente Europas sind. Dieses folgt schon zwangsläufig aus der Aufteilung in diese zwei Gruppierungen, die ja auch höchst anfechtbar ist. Scharfsinnige Überlegungen könnten genauere Grenzen zwischen beiden Bereichen ziehen, es bleiben aber Einordnungsfragen bei unzähligen Einzelerscheinungen ungelöst. Deshalb akzeptieren wir die Simplifizierung und wollen als Kunstmusikinstrumente die der europäischen Kultur und daraus wiederum die den höfischen, bürgerlichen und Dilettanten-Kreisen zuzuordnenden Instrumente verstehen; alle übrigen, also die Volksmusikinstrumente Europas sowie das gesamte Instrumentarium der anderen ethnischen und kulturellen Bereiche, wollen wir in diesen Überlegungen als ethnologische Instrumente bezeichnen. Es ist selbsverständlich, dass diese Unterscheidung nur in der folgenden Gedankengängen Verwendung finden darf, ansonsten aber nicht zu halten ist.

Der ungezählte Bestand an ethnologischen Instrumenten hat keineswegs zu grösseren, speziell ausgerichteten Anstrengungen bei deren Konservierung geführt, wofür in unterschiedlicher Richtung u. a. die folgenden Gründe erkennbar sind:

ein untentwickeltes Bewusstsein für die Bedeutung der ethnographischen Instrumente, insbesonders, wo ihnen ein dekorativer Wert fehlt;

die vermeintliche Möglichkeit, wenigstens einen Teil der schlecht erhaltenen Sammlungsstücke durch Neuankäufe jederzeit ersetzen zu können;

der häufig als bescheiden angesehene Gebrauchtswert der ethnologischen Instrumente für die üblichen musikalischen Darbietungen;

die Lage mancher der betreffenden Museen in Regionen finanziell beschränkter Möglichkeiten.

Kennezeichnend für diese Situation ist der geringe Umfang der Literatur zur Konservierung von ethnologischen Instrumenten, sowohl die allgemeinen Grundsätze als auch Einzelprobleme historischer, technologischer oder materialkundlicher Art betreffend. Zugleich wird man daraus zutreffenderweise auf die geringe Zahl, oder besser: das Nichtvorhandensein von Spezialrestauratoren schliessen.

Eine, ausführlichere Diskussion der grundlegenden Fragen zur Konservierung von ethnologischen Instrumenten ist deshalb mehr als überfällig, und so ist das endlich erfolgte Treffen zwischen dem International Council for Traditional Music (ICTM) und den ICOM-

Komitee für Musikinstrumentenmuseen (CIMCIM) besonders zu begrüssen. Im Rahmen dieser Tagung wurde der vorliegende Text in einer ersten Version den Teilnehmern unterbreitet; er soll in überarbeiteter Form hier einem grösseren Leserkreis zur Diskussion gestellt werden.

Zwei Ausgangspunkte scheinen für die Formulierung konservatorischer Prinzipien für die ethnologischen Musikinstrumente möglich: Zum einen kann man vom relativ sicheren Boden der Konservierungsgrundsätze, wie sie allgemein für die Erhaltung von geschichtlichen und kulturellen Zeugnissen akzeptiert werden, ausgehen und sich von dort zu unserem Ziel vorarbeiten; zum anderen können wir unseren Weg bei den Überlegungen und Erfahrungen, die für den Bereich der Kunstmusikinstrumente erarbeitet worden sind, beginnen und zu den ethnologischen Instrumenten bahnen. Diese zweite Möglichkeit bietet sich gerade im Zusammenhang mit dem Treffen zweier der Musik und den Musikinstrumenten verpflichteter Organisationen an und soll deshalb hier ergriffen werden.

Die Situation bei den Europäischen Kunstmusikinstrumenten

Die Erforschung der Kunstmusikinstrumente ist eine von der Musikwissenschaft weitgehend isolierte Tätigkeit von Spezialisten und wird oft im Verein mit Instrumentenbauern und professionellen Musikern der Alten Musik ausgeübt.

Charakteristisch für die Beschäftigung mit den Kunstmusikinstrumenten ist die Tatsache, dass es sich ausnahmslos um historische Objekte handelt, von deren Ursprung wir oft durch grossen zeitlichen Abstand getrennt sind. Es fehlt jegliches unmittelbare Erleben des Umfeldes, in dem die Instrumente entstanden (für das späte 18. und 19. Jahrhundert können wir auch sagen: entwickelt worden) sind: Unmöglich ist das Gespräch mit dem Instrumentenbauer über die von ihm angewandten Konstruktionsprinzipien und Herstellungstechniken; verloren ist die unmittelbare Anschauung des allgemeinen Technologiestandes der Zeit, dessen Kenntnis für manche Aspekte — beispielweise die Herstellung von Metallsaiten — so wichtig wäre; wir können keinem der Musiker lauschen, wie er eines der inzwischen historisch gewordenen Instrumente spielte, noch können wir mit ihm Fragen seiner Spieltechnik diskutieren; es fehlt die Möglichkeit zum Erleben des ursprünglichen Klangbildes eines gerade entstandenen Instrumentes; und schliesslich: wir besitzen praktisch keine Hinweise auf die zeitgenössischen Überlegungen und Praktiken zur Pflege und Erhaltung der Instrumente. Kurzum, es ist uns keinerlei Möglichkeit der Feldarbeit, also des Zusammentragens einer lebendigen Dokumentation gegeben.

Als Forschungsmaterial bieten sich die Instrumente selber sowie eine Reihe schriftlich niedergelegter Quellen (historisch-theoretische Abhandlungen, musikalische Kompositionen usw.) an. Leicht lässt sich daraus die Unersetzbarkeit jedes erhaltenen Instrumentes ableiten; jedes einzelne wird zu einem erforschenswerten Objekt, das nicht durch ein anderes vertreten werden kann (auch deswegen nicht, weil die Zahl der historischen Instrumente einer vergangenen Periode sich naturgemäss nicht mehr vermehren lässt). Damit akzeptieren wir also, dass jedes historische Instrument eine dem Forschenden offenkundige Individualität besitzt.

Es ist gerade diese Individualität, die man im Klang des jeweiligen Instrumentes nach der Wiederherstellung seiner Spielbarkeit zu finden glaubte. Für die dazu notwendigen Massnahmen schienen — und schienen manchen heute noch — die Instrumentenbauer prädestiniert, da sie über die notwendige manuelle Geschicklichkeit und Erfahrung im Besaiten, Intonieren, Regulieren usw. besitzen. Ein Musikinstrument, so wurde als Aufgabe für den Restaurator definiert, ist nur dann im Rahmen einer Sammlung oder eines Museums sinnvoll, wenn es seine ursprüngliche Funktion der Klangerzeugung erfüllen kann. Ein Instrument, das — aus welchen Gründen auch immer — diese Funktion heutzutage nicht mehr erfüllen kann, wird als totes Möbelstück ohne wirklichen Dokumentarwert gesehen. Es wurde also Restaurierung mit gewisser Ausschliesslichkeit als Wiederherstellung der Spielbarkeit verstanden,

während das Wort Konservierung kaum Eingang in den Sprachgebrauch fand.

In diesem Sinne ist bereits ein hoher Prozentsatz der erhaltenen europäischen Kunstmusikinstrumente restauriert worden, so dass die Arbeit an ihnen eine Zeitlang als abgeschlossen gelten konnte. In den letzten Jahren sind jedoch die in der Wiederherstellung der Spielbarkeit enthaltenen Gefahren und der hier und da zu beobachtende, unwiederbringliche Substanztverlust den verantwortungsbewusst arbeitenden Restauratoren und Kustoden immer deutlicher geworden. Dabei spielt auch die Frage eine Rolle, ob die Wiederherstellung des authentischen Klangbildes wirklich möglich ist: Unbeeinflussbare Materialveränderungen unter dem Einfluss der Zeit sowie notgedrungen hypothetische Ergänzungen oder Rekonstruktion fehlender Teile erlauben bestenfalls eine akzeptable Annäherung an die ursprünglichen klanglichen Eigenschaften eines Instrumentes. Aus diesem Grunde ist die Behauptung keineswegs übertrieben, dass — in Einzelfällen besser als das originale Vorbild — Nachbauten durch heutige Instrumentenmacher eine Annäherung an das ursprüngliche Klangbild ergeben können, und zwar aufgrund der noch jungen Materialien (insbesondere die sich verändernden physikalischen Eigenschaften des Holzes scheinen eine wichtige Rolle zu spielen). Aus diesen und anderen Überlegungen wird die gewisse Vorrangigkeit technologischer Dokumentation des alten Instruments durch den Restaurator/**conservator** abgeleitet (das Wort **conservator** wird hier bewusst im angloamerikanischen Sinne benutzt, womit der selbständig denkende und verantwortungsbewusste Restaurator bezeichnet wird, nich aber der Kurator, Kustos oder Sammlungsleiter, der in manchen Ländern den Titel eines Konservators trägt). Zu den Arbeitsgebieten dieses **conservators** gehört neben der selbstverständlichen Sicherung, dem Unterhalt und der ständigen Überprüfung der ihm anvertrauten Sammlung die Dokumentation im weitesten Sinne als Kern seiner Arbeit. Durch sie erschliesst er mit seinen Mitteln ein Objekt der interessierten Öffentlichkeit (der Forschung, den Instrumentenbauern, Musikern usw.). Einen breiten Platz in dieser Dokumentation nehmen die Beschreibung der Herstellungstechniken, materialkundliche Fragen und die Implementation von physikalisch-akustisch-musikalischen Gesetzmässigkeiten (z. B. die Tonhöhe, deren Diskussion weitgehend von Konservatoren geführt wurde) ein. Zugleich bezieht er auch technologische Nachbargebiete in seine Untersuchungen ein, so z. B. die metallverarbeitenden Sparten, die für die Drahtzieherei und damit den musikalischen Metalldraht von grosser Wichtigkeit sind. Von diesen Untersuchungen, Überlegungen und Erkenntnissen ist bereits viel in die Literatur zur Geschichte von Konstruktion und Technologie der alten Instrumente eingeflossen. Ein spezielles Schrifttum zur Konservierung und Restaurierung nimmt an Umfang und auch Kompetenz ständig zu (vgl. die Bibliographie „On the Care of Musical Instruments", CIMCIM Newsleter). Es is klar, dass diese Art der Arbeit, die nicht unmittelbar der besseren Erhaltung der Objekte dient, deshalb in grösserem Umfang möglich ist, weil deren physischer Zustand die Beschäftigung mit derartigen, manchen periphär erscheinenden Fragen erlaubt. Dieses scheint mir ein wichtiges Kennzeichen unserer historischen europäischen Kunstmusikinstrumente, die nur in Einzelfällen in ihrer Substanz (z. B. durch Wachstum von Fungi oder die Ausbreitung von Schadinsekten) bedroht sind. Häufig kann diese Situation durch verbesserte Aufbewahrungsbedingungen entschärft werden. Längst haben die historischen Instrumente einen Zustand des „Gleichgewichts" mit dem (schwankenden) Museumsklima erreicht. Schädigungen sind eher durch ungenügende Ausstellungstechniken, wie der übermässigen Lichteinstrahlung oder unsachgemässen Aufhängung in Vitrinen, oder den Vandalismus einzelner Museumsbesucher zu erwarten. Auf jeden Fall aber ist der Faktor Zeit in diesem Bereich unwichtig; es gibt keine Materialien, die binnen kurzem durch „normale" Umweltbedingungen in ihren Eigenschaften wesentlich verändert werden.

Die grösste Gefährdung der europäischen Kunstmusikinstrumente aber geht von deren Benutzung in Konzerten, während Demonstrationen usw. aus. Oft ist es schon allein der Zustand der Spielbarkeit von besaiteten Instrumenten oder Membranophonen, der die eigent-

lichen Probleme bringt; denn die Spannung auf den Instrumenten kann über längere Zeit zu irreversiblen Deformationen und in der Folge zu endgültiger Unbenutzbarkeit führen. Diese Erkenntnis setzt sich allerdings nur langsam durch, da sie insbesonders den Leitern von öffentlichen Sammlungen und Museen sowie den Privatsammler höchst ungelegen kommt. Notwendige Massnahmen sind aber dennoch bereits vereinzelt getroffen worden oder befinden sich zumindest in Vorbereitung.

... und bei den Ethnologischen Musikinstrumenten

Die Ethnomusikologie hat ungleich stärker als die traditionelle Musikwissenschaft die Klangwerkzeuge ihres Arbeitsgebietes in ihre Betrachtung einbezogen. Weiterhin ist die Ethnomusikologie wiederum in hohem Masse eingebunden in die Volks- und Völkerkunde, die Ethnologie. Dadurch sind die ethnologischen Musikinstrumente in einem Masse integrer Teil eines auf Gesamtheit ausgerichteten Forschungszieles, wie es im Bereich der europäischen Kunstmusikinstrumente unbekannt ist. Die Forderung nach einer möglichst umfassenden Dokumentantion des Umfeldes eines ethnologischen Musikinstrumentes noch lebendiger Tradition wird besonders dringlich erhoben, da die modernen Unterhaltungsmedien und — apparate die nicht durch die Öffentlichkeit institutionalisierte Musikausübung in den Bereichen der Volks- und Völkerkunde in zunehmenden Masse verdrängen. Der **field worker** sieht sich deshalb in verstärktem Masse vor der Aufgabe, die vielfältigen Aspekte, die Musik und das Instrumentarium des ethnologischen Bereiches genauestens aufzunehmen und in ihrer Vielfältigkeit der Forschung zur Verfügung zu stellen. Die unmittelbare Beobachtung und Anschauung während der Feldarbeit ist ein wichtiges Element der Ethnomusikologie; denn von einer reinen Instrumentenkunde kann oft nicht gesprochen werden, zu sehr sind das Instrument und sein Umfeld als Forschungsziel eine Einheit.

Teilweise allerdings wurde das allgemeine **environment** eines Instrumentes gewichtiger als dessen konkreter Zeuge, eben das Instrument selbst, beurteilt. Es wurde als Folge deshalb häufig das Instrument als ersetzbar betrachtet, insbesonders in den Fällen, wo ein „gleichwertiges" ohne grosse Probleme erneut lieferbar erschien. Mit anderen Worten, in gewissen Fällen ist einem ethnologischen Musikinstrument keine Individualität zuerkannt worden, es durfte also beispielsweise in musikalischen oder museumspädagogischen Vorführungen „verbraucht" werden, wo Ersatz greifbar schien. Verschiedene Beispiele der Vergangenheit haben aber gezeigt, dass solche nachbestellten Instrumente häufig in ihrer Ausformung eine Veränderung gegenüber dem Vorbild aufwiesen, verursacht durch einen entsprechenden Auftrag einer Institution, nicht aber eines musikalisch anspruchsvollen, autochthonen Spielers. In solchen Fällen wollten die Instrumentenbauer ihrem Auftraggeber in besonderer Weise (beispielsweise spezielle Ornamentierung oder moderne, „bessere" Materialien usw.) entgegenkommen, wodurch der gelieferte Gegenstand den ausschliesslichen Bezug zu seinem Entstehungsort verlor. Hier wäre auch eine Gegebenheit (berichtet durch B. Bachmann-Geiser) zu erwähnen, die zum Verlust eines wertvollen Instrumentariums durch den Eingriff einer „zu respektierenden Institution" führte: Eine öffentliche Fernsehanstalt hatte sich in einem entlegeneren Orte der Schweiz zu TV-aufnahmen mit den traditionellen Instrumenten angemeldet, es fanden sich beim Eintreffen des Aufnahmeteams diese alten Instrumente durch ganz neu angefertigte ersetzt, wodurch man der Wichtigkeit solcher Aufnahmen zu entsprechen glaubte. Die ursprünglichen Instrumente waren inzwischen an regionale Antiquitätenhändler abgegeben worden.

Die zu beobachtende Konzentration auf das geistige und musikalische Umfeld eines Instrumentes hat also gelegentlich zur Vernachlässigung von den aus der Feldarbeit mitgebrachten Instrumenten geführt. Ähnliches gilt für bereits seit längerer Zeit in Sammlungen befindliche Stücke. Die Erfahrung, dass sich für die ethnologischen Musikinstrumente im Umkreis der Sammlungen selten kompetente Spieler finden, trugen ein weiteres dazu bei. So ist es nicht verwunderlich, dass

es für die Konservierung und Restaurierung ethnologischer Musikinstrumente praktisch keine Spezialisten gibt. In Einzelfällen sind solche Stücke von ethnologischen Restauratoren ohne besondere Kenntnis der besonderen Eigenheiten von Musikinstrumenten bearbeitet worden.

Im simplifizierenden Überblick über die ethnologischen Musikinstrumente zeigen sich deren besondere Probleme vor allem in ihren Materialien, die in vielen Fällen wenig dauerhafte Eigenschaften besitzen. Typische Beispiele dafür sind frisch verarbeitete Hölzer, oft noch mit ihren Rinden, Früchte von Bäumen oder der Erde, Gräser usw. Viele Instrumente aus derartigen Materialien sind nur für eine begrenzte Gebrauchsdauer gedacht, also beispielsweise für einen Hirten, der die Sommermonate mit seiner Herde im Freien verbringt und sich bei erneutem Austrieb der Tiere im neuen Jahr neue Instrumente herstellt. Andere Materialien, beispielsweise Leder für die Bälge von Sackpfeifen, sind mit Hilfe sehr eigener, im industriellen Bereich nicht nachahmbarer Technologien zubereitet worden, um ihnen die notwendige Eigenschaften zu geben (einmal erhärtet, sind solche Lederbälge praktisch unbenützbar geworden).

Die Feldarbeit des Ethnologen wird deshalb Hinweise auf die Erhaltung der betreffenden Instrumente der Dokumentation einzuverleiben suchen; somit wird die Konservierung besonders empfindlicher Stücke schon während der Feldarbeit beginnen können und müssen. Es ist in der Tat bei einer Reihe von ethnologischen Musikinstrumenten der Faktor Zeit da von grosser Wichtigkeit, wo ethnologische Musikinstrumente ein Gleichgewicht mit der Umgebung noch nicht durch jahrelange Lagerung in einem mehr oder weniger konstanten Museumsklima gefunden haben.

Wie zu erwarten, ist der gegenwärtige Stand der Literatur zur Konservierung von ethnologischen Musikinstrumenten sehr dürftig. Es gibt kein entsprechendes Handbuch, es gibt nicht einmal Aufsätze von Qualität, die der Vielzahl von Instrumententypen, ihrer unterschiedlichen geographischen Herkunft und der Verschiedenartigkeit ihrer Materialien gerecht werden. Die wenigen bisher veröffentlichten Artikel sind offensichtlich nur aus der gelegentlichen Beschäftigung mit Musikinstrumenten entstanden (vgl. die oben erwähnte Bibliographie im CIMCIM Newsletter).

Folgerungen

Zusammenfassend lassen sich die Instrumente der europäischen Kunstmusik und die des ethnologischen Bereichs etwa folgendermassen miteinander vergleichen:

Während in der erstgenannten Gruppe das Objekt selber für sich sprechen und die wesentlichen Rückschlüsse auf seine Umgebung mühsam aus ihm selbst gezogen werden müssen, sind es in der zweiten Gruppe häufig die Ergebnisse einer thematisch umfassenderen Feld- und Forschungsarbeit, die ein Instrument begleiten und Erklärungen zu ihm abgeben. Zu einem ethnologischen Musikinstrument können öfter aus direkter Anschauung Aussagen über Herstellungstechniken, Instrumentenmacher, musikalische Verwendung sowie schliesslich auch die konservatorischen Erfordernisse gemacht werden.

Die unersetzbare Individualität, wie sie für die europäischen Musikinstrumente erkannt worden ist, wird nicht in gleicher Gültigkeit den ethnologischen Instrumenten zugesprochen, für die im Einzelfall Ersatz möglich scheint. In einer sich rasch verändernden Welt allerdings muss dies ein Trugschluss sein; jedes ethnologische Musikinstrument erhebt berechtigten Anspruch auf bestmögliche Pflege und Erhaltung.

Die europäischen Instrumente der Kunstmusik unterliegen, von Ausnahmefällen abgesehen, keinem Zeitdruck in ihrer Behandlung, während für die ethnologischen Musikinstrumente häufig sofortige oder baldige Massnahmen notwendig sind aufgrund der in ihnen verwendeten Materialien.

Die restauratorischen und konservatorischen Arbeiten für die europäischen Instrumente sind inzwischen zu einem guten Teil in den Händen von Spezialisten, die sich ursprünglich auf die musikalische Funktion, neuerdings auch mit den Konstruktionstechniken und Materialien beschäftigen (**object conservator**). Bei den

ethnologischen Musikinstrumenten gibt es praktisch keine Spezialisten für Musikinstrumente, gelegentliche Konservierungsarbeiten liegen in den Händen von allgemeinen Restauratoren (**material conservator**).

Sowohl im Bereich der europäischen Kunstmusikinstrumente als auch in dem der ethnologischen Instrumente sind spezielle Betrachtungsweisen, Kenntnisse und Erfahrungen vorhanden, die miteinander kombiniert der konservatorischen Arbeit an den ethnologischen Instrumenten nur zugute kommen können. In diesem Sinne scheint es auch gar nicht nötig, einen neuartigen Restaurierungsspezialisten zu kreieren, sondern es sollten sich für diese Aufgabe lediglich vorhandene Kenntnisse in neuer Weise miteinander verbinden: Für den bisherigen **material conservator** (allgemeinen Restaurator) ist eine Ausweitung auf das Verständnis der musikalischen Funktion und des ethnischen Umfeldes der ihm anzuvertrauenden ethnologischen Musikinstrumente notwendig; ein bisheriger Kunstmusikinstrumenten-Spezialist müsste lernen, die Breite der ethnologischen Dokumentantion in seine Arbeit einzubeziehen und gleichzeitig seine Kenntnisse der speziellen Materialien zu vertiefen. Es wäre unnötig und sinnlos, nicht auf solche vorhandenen Erfahrungen und Kenntnisse zurückgreifen zu wollen, sondern Arbeitskräfte ohne Kenntnis des bisher Erarbeiteten an die spezielle Aufgabe der Konservierung ethnologischer Musikinstrumente setzen zu wollen. Den Schaden tragen nur unsere Sammlungen und die auf ihnen fussende Forschung davon.

Der zukünftige Spezialist für ethnologische Instrumente könnte demnach definiert werden als ein **conservator** für europäische Kunstmusikinstrumente mit zusätzlichen Kenntnissen der in den ethnologischen Instrumenten gefundenen Materialien und des zu ihnen gehörenden speziellen Umfeldes; oder aber als ein **material conservator** mit bereits vorhandenen Kenntnissen aus dem Gebiet der ethnologischen Objekte mit — als zusätzlichem Gebiet — vertieften Kenntnissen der akustischen und musikalischen Eigenschaften der ihm anvertrauten Objekte. So gesehen wäre die Ausbildung von Spezialisten für ethnologische Musikinstrumente gar nicht so schwierig, wie sie im ersten Moment erscheinen will. Würde man Arbeitskräfte aus dem einen oder anderen genannten Arbeitsgebiet heranziehen und ihnen Möglichkeiten der entsprechenden Weiterbildung geben, so könnten innerhalb von vielleicht zwei oder drei Jahren Spezialisten mit Entscheidungsfähigkeit ihre Arbeit aufnehmen. Von ihnen wäre dann gerade für die erste Zeit ein Durchdenken der grundlegenden Prinzipien für die Konservierung der ethnologischen Musikinstrumente zu erhoffen; diese müssten zu einer Art von **code of ethics** weiter entwickelt und schliesslich auch verbreitet werden.

Zugleich ist von einer solchen Spezialisierung auf dem Gebiet der Ethnologie eine Rückwirkung auch auf die Spezialisten für die europäischen Kunstmusikinstrumente zu erwarten. Denn beide Spezialgebiete sind eigentlich nur Teile eines einzigen grossen Feldes, eben dem der Musikinstrumente, das als wichtiger Teil des zu bewahrenden kulturellen Erbes eingebettet ist in die mehr oder weniger allgemein akzeptierten Grundsätze zu dessen Erhaltung.

FEBO GUIZZI, MILANO

Traditional Forms and Meanings of the Preservation of Folk Musical Instruments

In considering the questions raised by traditional phenomena considering the conservation of folk musical instruments, one must begin with a fundamental distinction between conservation per se, as the practical result of an objective cultural process, and the underlying conditions subjectively active in determining such a result, these condition being comprehensively definable as „conservativity", or the propensity to conservation of those instruments by the subject (persons and groups) who create and use them.

From a general viewpoint, the entire folk-culture may be seen as a „dynamically conservative" system, i.e. a contradictionruled system aiming at a difficult balance, like a body in motion aspiring to a state of rest, attempting to reflect an image of permanence and stability. The motion has its source in the social subordination of the lower classes, as can be traced troughout the historically determinate social composition; the modes of dynamics are largely regulated by their instability and their interest in promoting every kind of cultural novelty (such as marginal groups, vagrants, story-tellers, professional musicians, etc.) and those members of society able, as true intellectuals, to interpret the permanent values of the community in terms of their cultural representation.

So „conservativity" may be explained as a cyclical refoundation of cultural behaviour, or as the trend toward maintenance of already existing cultural conditions in social life. This trend is most clearly seen in connection with ritual events, inside of which each single cultural formalization reveals its roots in the primary „technical-protective function of meditation", peculiar to the products belonging to the magical-religious world: in this field the practice of „varying and readapting repetition" acts as explicit sanction of cultural behiavor's regulation, essential for the maintenance of psychological equilibrium and of identity of the social group. Outside of the field of rituality, the diffusion of reiterating folk cultural products, „with its well known dialectic of conservativity and innovation", appears as a form of „secularization"[1] of the cyclical motion peculiar to magical-religious events; but, if for the general forms of cultural production and communication, we can avail ourselves of the classical theory of Bogatyrov and Jakobson[2], for the „every-day" situation of preservation and re-production of the results of specialized cultural work, as musical instruments certainly are, we must pay attention to the intermediate subjects on whom the conservation of these peculiar aspects of culture depends. They are both makers and users, each with his own behaviour in relation with his own peculiar public (users act in their turn as the most important „public" towards the makers). They are the protagonists of preservation and change, inside a general process evolving between conservation of functional purposes and invention of new forms of cultural functions.

Thus conceived, „conservativity" as a process does not exclude, but rather incorporates change; in a workshop, therefore, dedicated to material aspects of cul

ture, among which musical instruments may be included, it is particularly appropriate to demonstrate that this kind of process can be actualized in a sequence of destructive and reconstructive events perpetrated against the same material objects. In this case „conservativity" may imply just the opposite of „conservation". A systematic analysis of change-mechanisms, inside the sphere of „conservativity", can lead to an examination of four different hypotheses which may be summarized as follows:

1) unchanged repetition of both the conditions and the results of the cultural system (or of its appropriate part);
2) repetition of conditions and change of the results;
3) change of conditions and repetition of results;
4) change of conditions and results.

The first is the hypothesis according to which the established series of social structures and cultural occasions renews, with the same steady pace, the production of unchanged forms of musical instruments, unchanged because they have remained functional to their respective social structures and occasions, for instance, ritual instruments which last as long as interest is renewed in the rite. The second hypothesis may be exemplified by the occurrences in which social and functional framework is essentially preserved, while being partially molded again by changes in its phenomenology (as occurs when crisis processes of specialized manufacturing of an instrument, caused by precise and autonomous economic rules, do not necessarily coincide with the crisis in using the same instrument). In this case, the manufacturing and maintenance of the instruments passes into unskilled hands, and a determined morphological transformation takes place as a result of the different technical abilities applied in the work; we have such examples in Calabria, for the Zampogna a chiave (Plate 1 a, b, c, d). The third hypothesis becomes true whenever traditional modes of behaviour emerge again in new contexts that seem incongruous with activities ordinarily associated with structural conditions, now obsolete, as happens with „urban folklore" in sports events and mass meetings, where themes and even sound instruments which, in the past, were strictly used in the carnival, are now seen to reappear. The fourth hypothesis is most obviously verified in the innumerable episodes of transformation in social life, to which we have become accustomed in recent times, but which are certainly traceable in every phase of evolution or revolution within ethnical, social and economic structure in the past.

It is not here and now that I am able to thoroughly investigate these problems; I would only point out that the real key to avoiding mechanical simplifications is to be found by searching directly into the sphere of the utilization of musical instruments, and noticing the specific role played by each of the essential groups or individuals, such as makers, performers and public, each with his own cultural competence, in the presence of historical changes. Innovation and preservation are two notions related to the types of division of labor, the working process by which the instrument is constructed, to the structures of the musical language, and to the answering power the instrument exhibits in respect to the overall cultural request manifested by the users. Then we have instruments that have, for a long time, been considered morphologically „immobile", but which are used in a repertoire containing rich strata of modernizations, as in these cases of the Zampogna and Piffero in Italy. On the other hand, the instrument itself can be changed and modernized, or be considered, since the time of its adoption a morphologically „modern" instrument, yet preserving an „archaic" repertoire and performance practice, or sounding in a permanently fixed style because of peremptory functions, hardly alterable „from the inside", such as those functions contained in dance music. In this last case, such instruments are destined to undergo a process of increasing „archaicization", as with the violin and diatonic accordion called the „organetto".

All these questions are quite significant in the presence of at least a small but vital remnant of a musical tradition — for as long as the instrument is viable in its complete function, in its capacity to produce

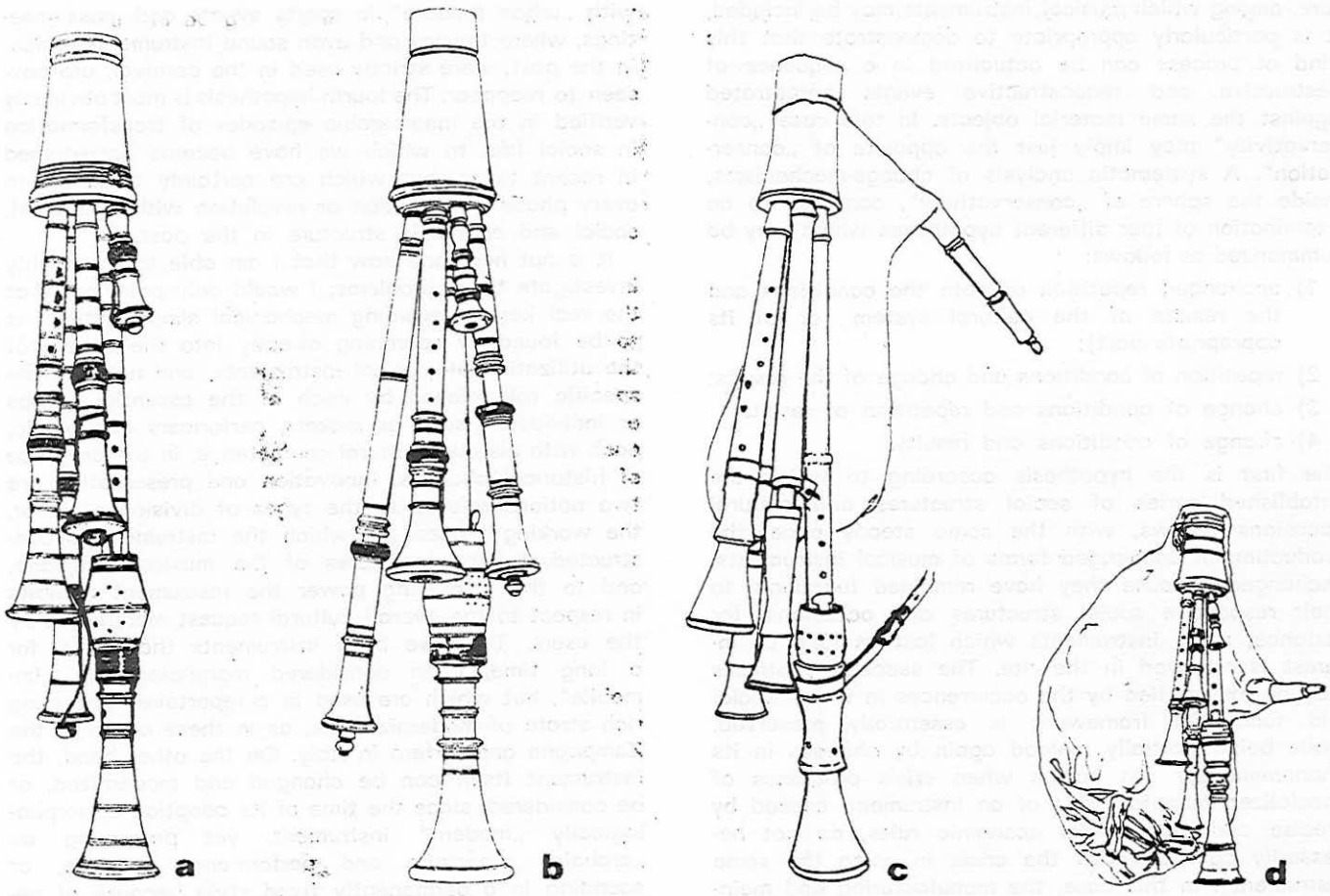


Plate 1. Cultural preservation of a type of instrument, and morphological change of its appearance: the Calabrian „zampogna a chiave": a) and b) - two examples of traditional structure of the instrument once turned by specialized makers. Conical chanters, all pipes with double reeds; c) - a „zampogna a chiave" made with a knife by a player, using cane-reeds and wood. Cylindrical chanters, four pipes with simple reeds; d) - another unusual „zampogna a chiave" made by a maker specialized for other types of zampogna. Simple reeds in the five pipes.

and reproduce music, as long as there are skilled workers to make, manufacture and maintain the instruments with all their phonic and musical qualities, and to see to their preservation. It doesn't happen, in fact, in folk culture, that the preservation of a musical instrument is sought after as a practical result of an independant effort, as apart from the preservation of the instrument's primary function; and we can affirm that any concrete instance of an instrument's preservation almost never constitutes an acknowledgement of the instrument's autonomous value, according to which its function is displased from its strictly musical or ritual destination, to the function of an historical document. So, whatever is preserved is significant, but since instruments are not kept because of any significance beyond their direct musical value, the whys and ways of preserving something are specially interesting. The general rule is that of submission to utility. This means that the attention paid to the instrument is only as to one it can name as an object effectively usable for its phonic and symbolic properties. An instrument's material value, if deprived of these properties, quickly loses interest; the same iconic dimension, which sometimes may be recognized as a source of independant aesthetic values, is not separable from the general practical value assigned to the instrument. The communicating power inherent to the object's visible aspect contributes to making the instrument more efficient; the forms, the ornamentation and so on, are inseparable from the functional use to which the object is appointed, and they appear as stratified reflection of the cultural values linked with that use.

In my research I have always had difficulty in distinguishing the aesthetic appreciation for the form of a particularly well-made instrument, from the satisfaction gained from its acoustical properties; both these qualities can be in their turn associated with the oldness of the object: beautiful sound and craftsmanship are valued in an old instrument nearly mythicized for its having belonged to an era of which people nowadays have no direct experience, and it is, of course, regarded as better, and rightly so, for at that time they really know how to make a good instrument: But another reaction may arise; if the instrument is too old to look like the ones currently in use, one may doubt that it is really able to sound well if it cannot be clearly placed within the comparatively abstract pattern from which it may not be allowed to derogate if not by individual concrete variants.

So, belonging to the past and oldness are not important cultural values in themselves, or at least they are less strong than the value given to the actual rule.

In order to better assure its use, sometimes the instrument is subjected to consideration or protective rites that serve the purpose of guaranteeing its efficacy and durability, as if facilitating the release of its intrinsic properties, consenting to its passage from the stillness into musical stirrings, to concur with the player's technical intervention, to produce together, the instrument and player, good music. On the other hand, the instrument can also suffer violent aggression, or be physically destroyed if it appears to be a source of misfortune, or at least not to work as well as is necessary (This is true of cattle-bells which the Sardinian shepherds charge with having failed in the protection of the animals and of having been the cause of bad luck; they are crushed out in a special rite of exorcism, after which they are hung again around the neck of the sheep).

The idea that submission to utility rules over any evaluation of the instrument as an aesthetic object is confirmed by those cases in which there is no evidence of conservation beyond the limit of effective use, because the instrument itself does not materially exist except on the occasion of its use. I am referring particularly to those cases of use definitely restricted to ephemeral functions, and not to the realm, impossible to investigate in its entirety, of objects temporarily and fortuitously used as musical instruments, without the need of modification in any way of their structure, such as spoons, stones, bottles, etc. The most interesting are in fact the instruments made especially for a temporary usage, the restricted duration of which

constitutes the real symbolic key to their function, as is the case, for example of the „cupa-cupa", a friction drum of Basilicata, made from a wheat measure, used in winter rites of the killing of the pig, and then destroyed. Equally significant are those instruments of very brief duration, used for their proper nature and structure, such as those made of fresh vegetables.

These examples of total material non-conservation notwithstanding, the majority of cases are those of normal use according to the duration of the natural cycle allowed by the material of which the instrument consists. The history of these instruments is a long series of maintenance and repair interventions which add to the sequence of minute destructive actions caused by wear and tear, and a parallel sequence of partial reconstruction of the instrument, with neither aesthetic scruples, nor bonds of fidelity toward the original, save those necessary in maintaining the functional integrity of the instrument, including therefore, the restoration of the peremptory and significant iconic dimension.

It is useful to distinguish between the repairs done by the skilful maker, which are often true replacements of damaged parts with new ones, and the operation done by the player-owner, especially when the skilled makers have all disappeared, their absence forcing one to make up, with inventiveness, for the lack of technical knowlegde. An ever increasing number of measures divised to prolong, for as long as possible, the life of the irreplaceable instrument are carried out, having recourse to recovery materials, to devices at the same time rudimentary and ingenious (Plate 2 a, b, c, d).

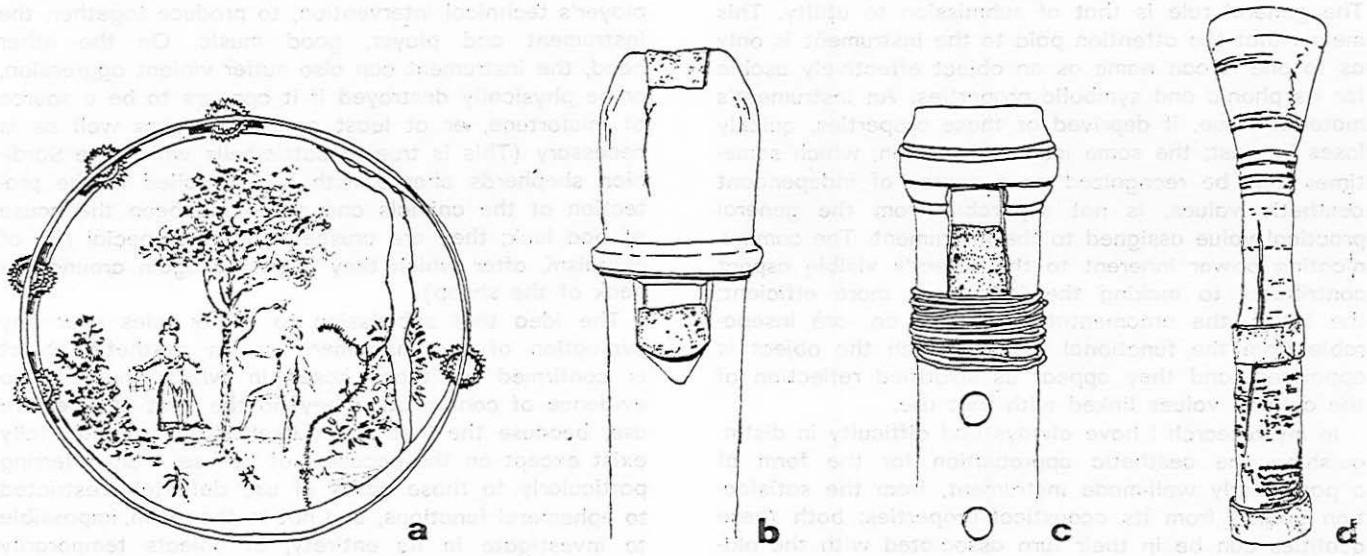


Plate 2. Examples of repairing folk instruments: a) frame-drum with broken skin partially sewed (Musée Instrumental du Conservatoire Royal de Musique, Bruxelles); b) and c) two folk recorders (b-from Alessandria Apenine, c-from Bergamo Alpine valleys) both repaired with metal plates mounted over the damaged windows; d) drone-joint of a „Piva" (bagpipe from Parma Apennine) repaired with two iron rings trightening the split pipe. Previously the outer turned surface had been roughly levelled with a knife.

All kinds of available tubes, or materials easily made into tubes — from elder branches to plastic pipes — may become useful substitutes for the damaged pipe of a wind instrument; scrap metal, especially tin-plate, is generously applied to sound bowex of cordophones, or to bodies of drums; screw rods help restore the right angle of lute necks (Plate 3), and so on. I have verified that only in these specific circumstances, in which professional makers are no longer available, does the practice of transmitting the instrument from generation to generation become customary. When the replacement of old instruments becomes impossible, any player who wishes to continue his performing life is forced to use an inherited instrument. This happens independently of cases of handing over as investiture and idealistic transmission of prestige and authority from father to son and from master to pupil, which constitutes one of the most important features in the material preservation of folk instruments in the course of their history.

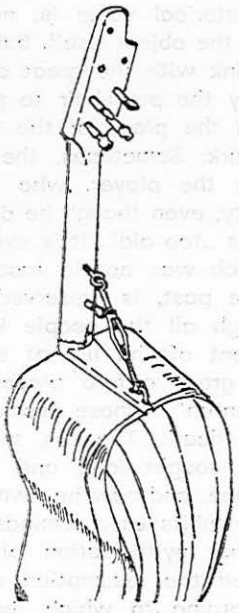


Plate 3. Calabrian „Chitarra battente" repaired with a metal scew-rod sustaining the broken neck.

The task of the professional maker is, on the contrary, to act as a maintenance service at the disposal of the customer of his workshop. Instruments are submitted to him both for „restoration", if damaged, and for periodic replacement of accessory parts, when the instrument is in basically good condition. Of course, no principles of scientific restoration can guide the repair work. Concepts such as reversability, nondestructiveness, documentation of the operating procedures, gradation of operations, and so on, are unknown to the artisan, who simply „restores" some parts of an instrument, reconstructing them when it is unprofitable to replace the entire instrument with a new one. For this reason the workshops of professional makers are often interesting places on temporary storage of old and damaged istruments, or the parts thereof. As a maintenance centre, the workshop sometimes serves a very large user's bin, applied to with perseverance and regularity. In my field research on the Zampogna, I met an old makers near Caserta, whose little customer register I had the opportunity to examine: every year, in the days before the Christmas festivities, more than one hundred players come to him from three different provinces to renovate their bagpipes and shawms, changing the bags, the reeds, the springs of the keys, and oiling the pipes. Some of them get a pipe changed, and others get the instrument tuned by the artisan.

In almost every musical instrument, there is a distinction between the permanent parts, for whose preservation a particular care is varnished, and the transient parts, which need periodical replacement. Maintenance of these latter always serves the purpose of better temporary efficiency, even to the point of recourse to techniques that in the long run endanger the lives of the very parts in question. So, strings, reeds, goat-skings for bagpipes, drum-skins, and so on, are subjected to stretching, scraping, trimming, seasoning, soaking, drying, pitching, etc. — all of which

sonn bring their decay and need for replacement. But sometimes the „permanent" parts also receive a drastic treatment, which allows us to posit that the instrument making process does not stop with the „finished" product, but continues in another way, with the setting in gear of the instruments as an actual sounding tool by the player. This is common with fixed tuning instruments, such as woodwinds, on which the player is known to open up new holes, closing those made by the maker, or radically modifying them with a knife, in search of the best musical result.

Another distinction can be made between instruments whose construction requires a professional maker, and those that can be constructed by the player himself. These latter are generally the simplest instruments made of materials readily available in a natural, or human environment, such as cane reeds, bones, plastic tubes, gourds, tin pots, etc. Brittleness and low cost cause these instruments to be short-lived and poorly rated, so they are seldom the objects of conservation. Liable to exception are the instruments for which the choice of natural materials and auto-construction are not signs of low value, but are rather qualities proper to the specific and acoustical behaviour of the instrument, as happens with cane flutes and clarinets (the Launeddas, for example). The maker-player often takes great pains to finely decorate the surface of these instruments, and this kind of accessory valorization of the object is a clear sign of what he intends and wishes about the preservation of it as a durable specimen; other similar signs are the engravings of date or the name of the maker.

Though uncommon, there are instances in which an instrument is well preserved, even though its playing life is finished. Perhaps the most significant is the custom of preseving, by the maker, old instruments singled out as archetypes, and thus stored and jealously guarded as sources of construction guidelines appropriate to all the specimens normally produced. These latter are therefore considered to be copies of the former, which, in their turn, take on the value of real matrices and technical and symbolic warranters of the maintenance and continuation of the tradition. Inside oral culture even the technical knowledge is felt to be failing and provisional, if not put into concrete practice; for this reason, the archetypal instrument is relied upon to revitalize the memory whenever necessary and to help as a mediator in testing the precision of tools.

We have a few examples of musical instruments that are the collective property of the community, which conserves and stores them, awaiting the occasion on which they will be used. This occurs with Brotherhoods which store the processional drums, or with parishes which keep the noise makers for Holy Week; aside from these cases and other similar ones, only a few individual instruments have been materially preserved as a memento or document, owing to their past ownership by a single prestigious player, whose importance has entered into a mythical dimension. In such cases the historical value is, nevertheless, not always ascribed to the object itself, but to its capacity of establishing a link with the great deceased player; it is reemployed by the pupil-heir to prove the legitimacy of his taken the place of the master in order to continue his work. Sometimes, the old instrument is only carried by the player, who derives from it prestige and security, even though he does not actually play it because it is „too old". It is even possible that an instrument, which was not in fact owned by the great player of the past, is preserved as a souvenir of him, even though all the people know that it is not a real document of the life of the player. This happened with a great piffero player of the Pavia mountains, „u'Fiurentên", whose instrument was not preserved after his death. The son, many years after his father's death, sought long and hard, a piffero similar to the lost one, and now he owns an instrument which he proudly exhibits as a reminder of his father. In other cases, the mythicization of the deceased owner has prompted the resumption of very ancient funerary rites, according to which the instrument is buried with the dead owner or player, thus materially disappearing from the world together with the only

person deemed worthy of possessing it. It is paradoxical, but also significant that this particular ritual practice, allusive to a presumed life after death — also for the instrument, could bring about the perfect preservation of a folk instrument (as in Ancient Egyptian specimens we now possess) with the effect that from the fortuitous disinterment of the corpse, a bagpipe maker from Scapoli, (Molise) could come into possession of an instrument hitherto unknown to exist, its din no longer manufactured or played, one specimen of which, however, happening to have buried with its owner. Today this type of zamponga is normally produced and played, and I believe that this is the most radical case of revival that anyone could encounter in the world of ethno-organology.

Outside of exceptional events, as this last, it is really unusual that a „deceased" folk musical instrument could be involved in a spontaneous revival: the more folklore is conceivable as a „unceasing revival, a continuous explosion slowly flowing back in the memory of the community"[3], the less it is admissible that anything getting out of this process, could return again inside it, as result of a mere willing act.

The question of preservation of instruments as „findings", or „documents" is at last essentially a problem alien to the folk culture: it arises only in the „museum culture", that is, in the field where the „findings" and documents are created contemporaneously with the establishment of the institution devoted to their preservation. The culturally definite use of musical instruments is then a fact theoretically opposed to their preservation; the sequence of progressive destruction, operated by wear and tear, goes so far as to modify, even deeply, the integrity and material appearance of the instruments; during this process, however, the ontological conditions maintaining the instrument in its primary identity still survive and reproduce. The preservation of the instrument as an object out of use, if it is an historical event that stops a process of wearing out (but in any case it does not stop its physical decay), also effaces the conditions of the instrument's (cultural) integrity. It becomes the material remnant of a whole of objective and subjective, dynamic and static phenomena, which formed the cultural and musical reality of the instrument itself, from which it is decayed, to be displaced in a totally new context. Of this whole of phenomena, the body of the instruments preserves important marks, indispensable for partial reconstruction of its historical itinerary; but it cannot be token back to that whole phenomena. So, in „restoring" (i. e. in repairing) an object, we cannot pretend to operate the „restoration" (in the sense of re-establishment) of spatial and temporal coordinates, definitively extinct in the historical past. Such a pretension is only an utopian illusion, beyond which remains the concrete field of scientific research and of scientific practice of preservation and restoration.

Notes

1. This last quotation, as the two previous ones, are from Ernesto de Martino: Morte e pianto rituale. Torino 1958, 146.
2. Piotr Bogatyrov; Roman Jakobson: Die Folklore als eine besondere Form des Schaffens. In: Donum natalicium Schrijnen, Nijmegen - Utrecht, 1929, 900 - 913.
3. Bruno Pianta: Ricerca sul campo e riflessioni sul metodo. In: La ricerca folklorica Nr 1, april 1980, 65.

Part Three

Presentation

history. To make matters worse, it had become clear that centuries-old restored museum pieces by no means were likely to sound or function as their makers had originally intended them to do. Thus, the new voice of and older instrument was not necessarily suitable for use in a situation where historical correctness was a main point of concern.

The same problems beset the ethnomusicologist who was intent on preserving the musical usefulness of instruments which had been removed from their native areas. For at least one reason, the ethnomusicologist's problems appeared even more acute than those besetting the curator trying to maintain a collection of European concert instruments in playable condition. Material of European origin which survives in European museum collections is currently housed in basically the same geographic and climatic area where it originally was constructed. When dealing with non-European music, and instruments which have been removed from their native areas, climatic conditions at least, may differ widely from those which the instruments were designed to withstand.

This, in turn, often has serious consequences for the choice of conservation procedures for a given instrument. Additionally, the conservator may be confronted with instruments made of unfamiliar materials, and is therefore unable to suggest entirely suitable means for basic conservation, to say nothing of ways to retain or restore an instrument's playability. As a result, many ethnomusicologists no longer regard it as vital to be able to play upon the objects of their study. Nonetheless, the conservation of this material presents problems requiring further consideration.

The apparent conflict between the musical usefulness and the documentary value of musical instruments is the cause of what remains one of the greatest problems for present-day musical instrument museums. Many curators are reluctant to admit any need for a fundamental change in their approach to their holdings, retaining the belief that, „the only useful musical instrument is one which is played upon". Others have adopted a firm stance against any further deterioration of the condition of their collections, even if this involves the instruments not being available for anything other than superficial optical examination. A safe and useful general policy has yet to be suggested, and perhaps never can be. The approach described below has been implemented with favorable results at the Music Museum in Stockholm. No claim is made for this being particularly novel, as it contains many elements which will be found in the practices of other museums. However, it is presented here in the belief that a similar approach has yet to be implemented elsewhere when dealing with folk musical material.

3. Specific procedures

The method used in Stockholm may be better understood by first considering its applicability to a very common museum problem in conservation and performance practice. A museum, or anyone else, presenting a concert involving keyboard instruments will have to place such instruments at the disposal of the performing artists. Woodwind and string players can normally be expected to carry their own instruments with them. For obvious reasons, however, it will not always be possible for keyboard players to do the same. A convenient solution to this problem, at least for a museum, is to place few restrictions on the performance use of the keyboard instruments in its collections.

In the light of the previous discussion, there is good reason to doubt the wisdom of solving the problem in this manner. An alternative solution is simply for the museum to purchase newly-built instruments of the type otherwise likely to be in the possession of musicians. A specimen reaction to this suggestion might, however, be that the expense of doing this is in no way justified, especially considering how many „fine playable old instruments" the museum already owns. It might further be argued that the concert-going public should not be denied any opportunity to hear the older instruments in performance situations. Again, with reference to what has been said above, yielding

to these arguments may have a large number of totally counterproductive results.

A third option, and the one exercised in Stockholm, is for the museum itself to build reproduction instruments suitable, amongs other things, for use in concert situations. The museum is not subject to the same pressures of time which unfortunately influence commercial instrument makers, and can therefore prepare reproductions which are as free from compromise as is possible. Additionally, since both the original instrument and its reproduction would be available for side-by-side comparison, it would be relatively easy to perceive any physical inadequacies in the quality of the reproduction and eliminate these in a subsequent reproduction. A successful reproduction in this sense would be an instrument which the manufacturer of the original would regard as equivalent in every aspect to what the original had been when new.

It is common practice for museums to produce technical drawings of their instruments, and to place these at the disposal of musical instrument makers who presumably will use them in connection with the manufacture of reproductions. The museum often prepares this material in conjunction with the restoration of an instrument. There is, however, no reason why such drawings could not be prepared specifically as an initial step in the museum's own manufacture of reproductions. In the doing they would be more likely to be useful in the workshop situation than are drawings made primarily for purposes of historical documentation. In any case, changing the museum's own workshop activity from restoration to reproduction may eliminate some of the more dubious side effects of restoration, as well as providing necessary reproduction instruments.

A central point which may be made in the light of the experience in Stockholm — and one which cannot be emphasized strongly enough — is that the reproduction instrument is not to be seen as a replacement for the original. It is an extension of the original, and the union of the two instruments enables the safe and satisfactory study of many otherwise inaccessible aspects of their morphological and musical natures. Something which traditionally has not been appreciated, and which in many ways is the source of the basic dilemma, is that a restored musical instrument of necessity will no longer be solely a product of its maker. Once even the mildest restorational procedure has been undertaken, the documentary value of the object may well be diminished irrevocably. The decision to permit this cannot be justified solely by the romantic aspect of the desirability of an older musical instrument being once again given something which can be believed to resemble its former voice. With the original/reproduction pair, the museum will have both the intact document and a useful musical instrument. With the restored original, it is quite likely to have neither.

It is now possible to extend the basic principles expounded here into the area of folk music. Photo 1 shows a portion of an exhibition, in the Stockholm museum, which is devoted to 18th century Swedish folk music.

The display case contains a hummel, a hurdy-gurdy, and two block-and-duct flutes. Next to the display case is a museum-made reproduction of the hummel (propped-up from its normal horizontal playing position to be more visible in the photograph). Attached to the table on which it rests is a sign printed in large letters specifically encouraging the museum visitor to try playing upon this instrument. A similar table holding a reproduction of the hurdy-gurdy (made by an independent instrument maker from a drawing prepared by the museum) is also positioned near the display case. Reproductions of the flutes are not available, but this is solely for hygienic reasons.. Drawings of both the hummel and the hurdy-gurdy have been made by the museum, and are on display and available for purchase in the museum's shop. (See Figures 1 and 2).

Even if there were any reason for restoring these instruments, none of the restored material would be placed at the tactile disposal of the museum visitors (The hurdy-gurdy, for example, is one of two known such instruments which may be of Swedish 18th century origin). As it is now, the original instruments are kept on full display at the museum, and are accessible for

Figure 1.

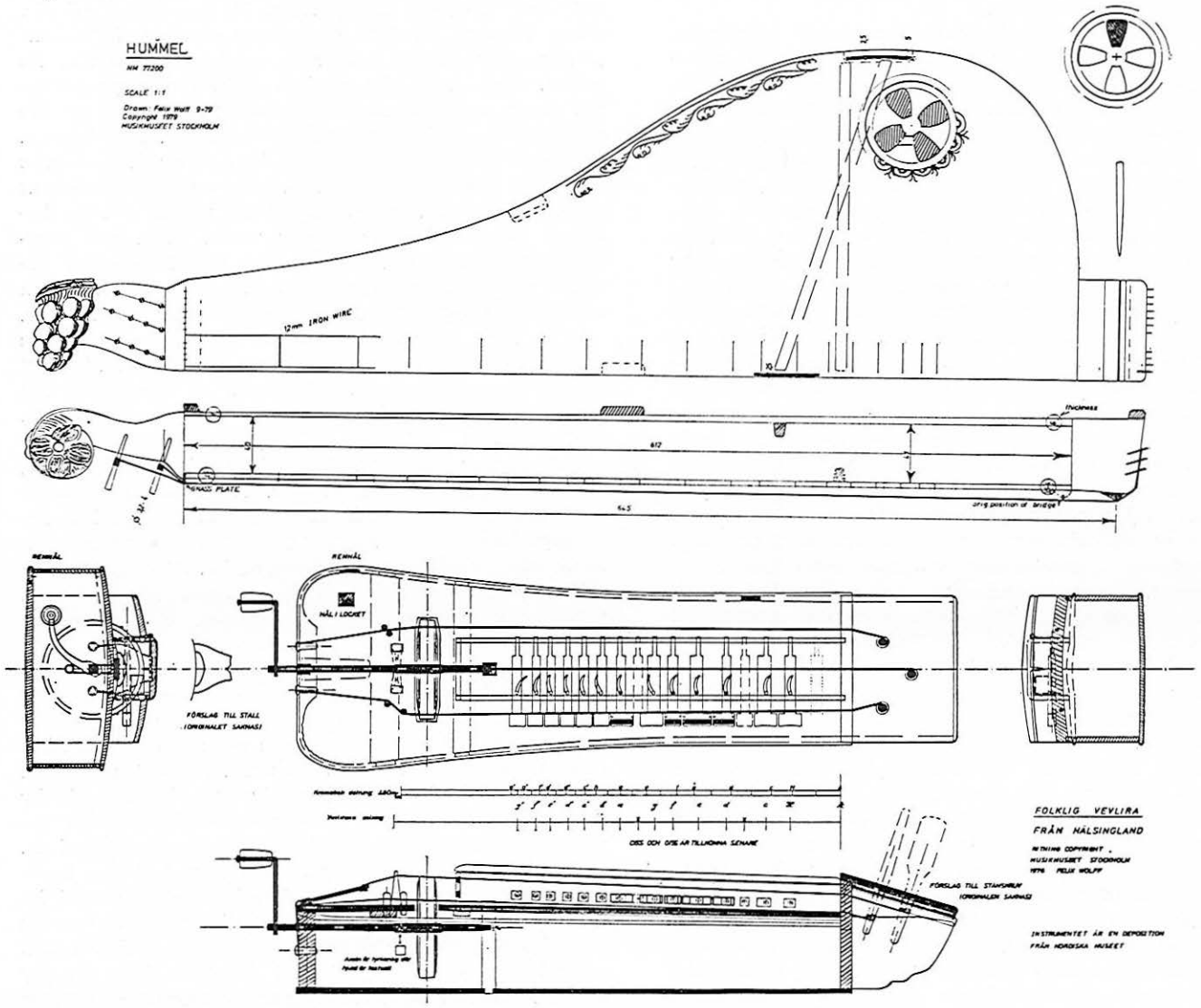


Figure 2.

Plate 1. ▶


F25.

more detailed study. The museum visitor is both encouraged to play upon reproduction instruments which are very likely to display all of the musical characteristics which the older material initially was intended to have, and is offered an opportunity to purchase of these instruments.

Another display case, containing 19th century Swedish folk material, is shown in Photo 2.

Photo 3 shows a table placed near this display case.

The reproduction psalmodikon was made by the museum. The chord zither was simply purchased in a music shop, since these instruments are still in production and use in Sweden. There is also drawing of the psalmodikon. (See Figure 3).

All this material has been prepared and presented in the same fashion as shown above

The materials of which the preceding instruments were made are reasonably uniform. In this regard there is little difference between, for example, a harpsichord and the psalmodikon. The basic principles of construction of the folk instruments are also well understood. When dealing with instruments of this type it is, therefore, not difficult to assert that the differences between folk and concert instruments may be ignored. The question may remain as to whether this principle can be applied to musical instruments made of relatively perishable materials. It should easily be seen that it, indeed, can. It may, in any case, be apparent that it is essentially irrelevant whether or not such instruments are of folk origin.

This problem has been confronted in Stockholm with at least two types of unstable materials — leather and bark. The former material is encountered on the indigenous Swedish bagpipes. Such instruments may easily be displayed despite their bags having become brittle. As previously mentioned, the museum is not able to keep wind instruments available for the visitor's experimental use. Reproductions of several bagpipes in its collections are, however, currently available from a number of instrument makers. Photo 4 shows two types of instruments made partially of bark.

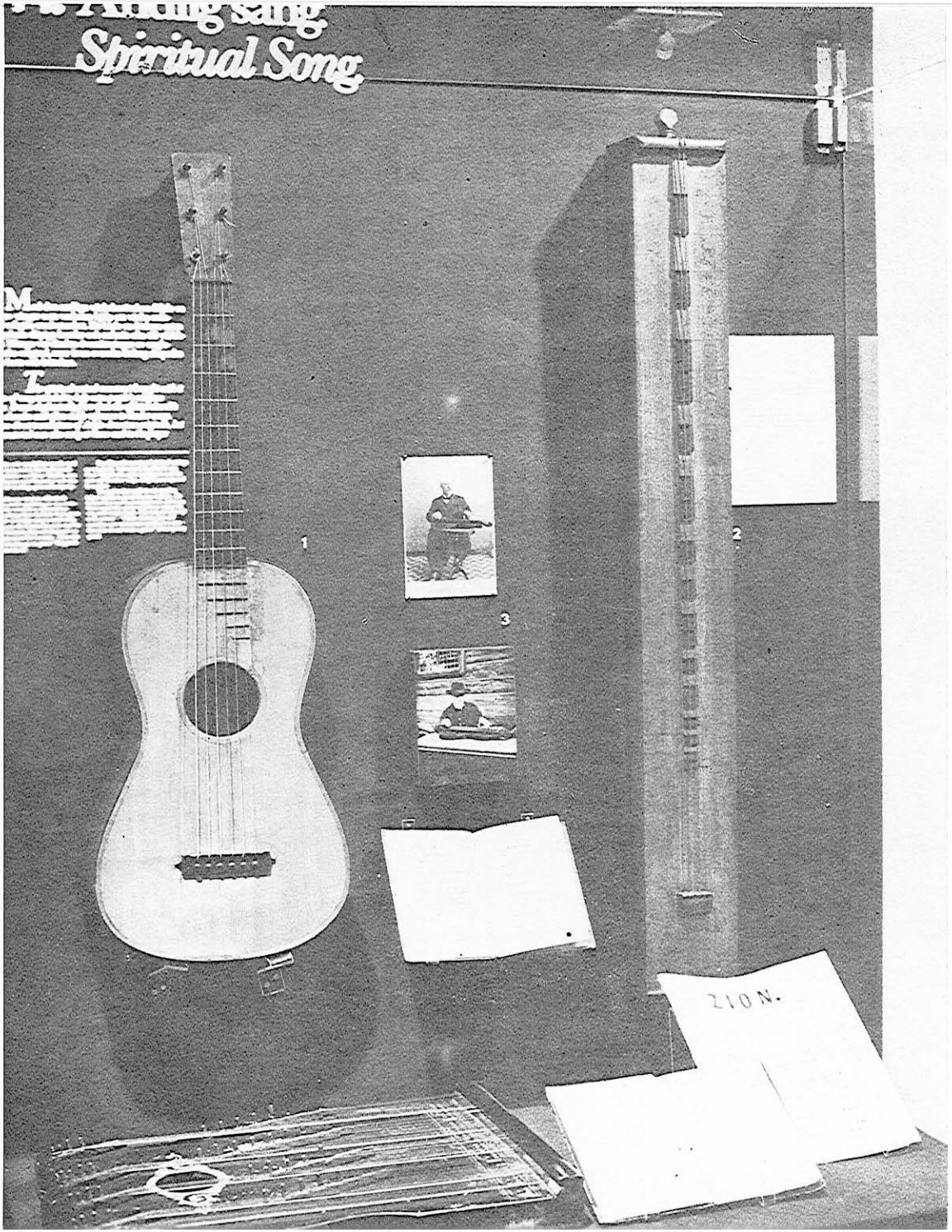
The bark-bound clarinet (as well as the more common bark-bound straight trumpet which is not shown here) can easily be displayed despite their bark covering no longer being airtight. The willow flutes which are exhibited at the bottom of the display case are typical of those instruments which are only intended to have a brief musical life. The display shows the instrument in various stages of production. Since the museum staff member who prepared this material learned how to do so as part of a living folk tradition, the objects on display should be regarded as museum-made originals, rather than reproductions!

Many instruments which may only be intended to have a short period of musically useful life clearly present no great problems in a museum situation. Their deformation due to material decay (drying out, etc.) will only rarely reduce their suitability for satisfactory display, or physical examination. Their loss of voice is in no way different from, for example, the loss of voice of virtually any unrestored harpsichord. The reproduction instrument will remedy both problems equally satisfactorily. Reproductions of the folk instruments will have musical lifespans as short, as those of the originals. However, the amount of time required for the production of a materially ephemeral instrument may often be small.

It should perhaps be mentioned that the work done in Stockholm was initiated with folk music instruments. First, subsequent to determining the utility of the original/reproduction/documentation approach with this material, was an attempt made at treating keyboards, or any other concert instruments, in a similar fashion.

There is a boundary past which the principles suggested here cannot be extended. When dealing with truly exotic instruments, it may not be possible either to make, or to obtain satisfactory reproductions (remembering that not every object which appears to be a musical instrument actually was intended to be played upon). This may be a question both of access to the requisite raw materials and of understanding the necessary methods of production, including what may be

Plate 2.



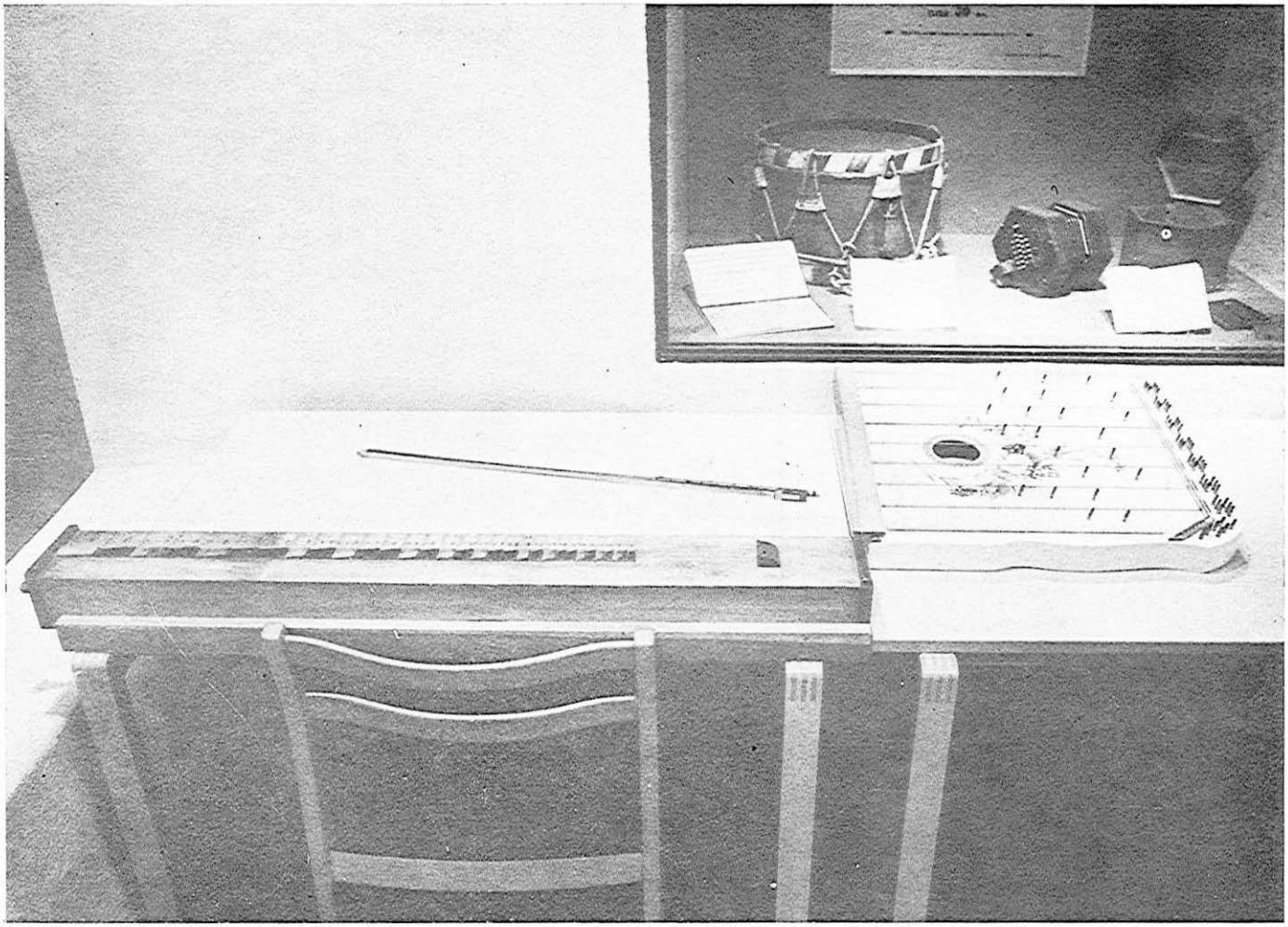


Plate 3.

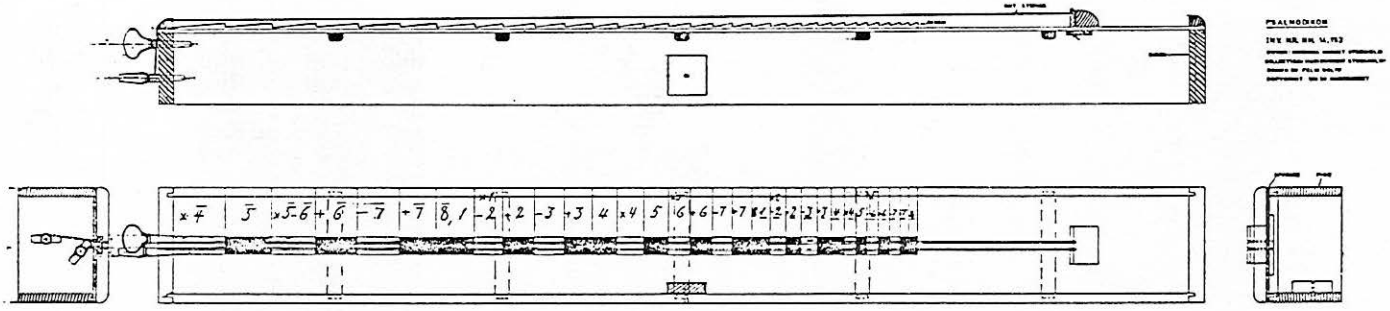


Figure 3.

a large number of ritualistic, or magical aspects. When confronted with an instrument of this type, the ethnomusicologist will have to deal with the dilemma of either playing upon the instrument until it reaches the end of what may be a short musical life, or assuring the material survival of the instrument to the fullest degree permitted by the conservator's ability.

The practical extent of this problem may be somewhat self-limiting. It is thoroughly senseless to sacrifice an irreplaceable musical instrument for performance use, without possessing reasonable knowledge of the traditonal techniques by which it is played. Access to this information implies similar access to information about the traditional means for maintaining the instrument. The ethnomusicologist who is in possession of this information should often be able to expand its scope to include knowledge about the means by which a reproduction could be produced. The problem of finding substitutes for inaccessible raw materials should not be insurmountable.

In general, when dealing with instruments which present problems of this extreme type, the need for documenting the materials and techniques of their construction is of primary importance. If a reproduction instrument can be made, there are few subsequent problems. It is when the reproduction cannot be made that difficulties arise. It should be obvious that assuring the material survival of instruments which cannot yet be reproduced is absolutely necessary. It might be wise for both the ethnomusicologist and the organologist to become aware of the „endangered species" within their immediate field of concern, before it is too late.

4. Concluding remarks

The traditional „playability above all" attitude towards both concert and folk musical instruments has a number of less than positive aspects. The possibility of making and using reproduction instruments, rather than playing upon the „originals" is not a new concept. Under closer scrutiny, however, many so-called reproductions will reveal themselves to be substantially different from their prototypes in many important points of detail. Perhaps for this reason, all reproduction instruments are often regarded as somehow inferior to originals. An approach has been suggested here where neither the original, nor its reproduction in seen as the object of primary interest. Rather, the union of both of these is used to fulfill as many as possible of the various demands which can be placed on a musical

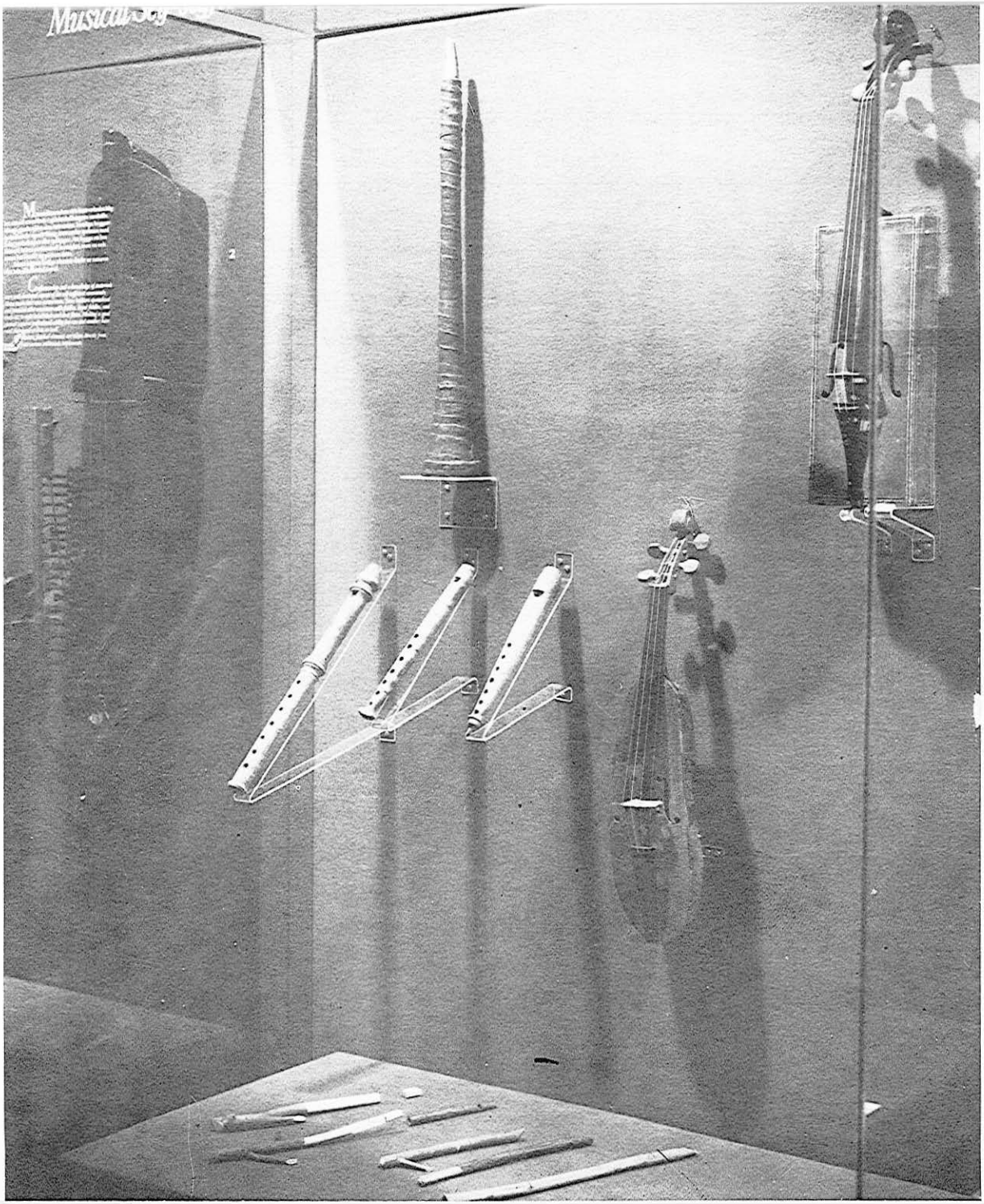


Plate 4.

instrument. Both the original and its reproduction can be integrated into a museum exhibition in a manner which enhances the experience of that exhibition. The voice of the reproduction is often more correct in historically oriented musical contexts, than the voice of the restored original ever could be. The documentary material used to enable the construction of the reproduction can be distributed, thereby making it possible for additional reproductions to be made by people without access to the original itself. Perhaps most important, assuring the material survival of the original into an undefinedly distant future will help maximize the ability of coming generations to understand and appreciate our common cultural heritage.

PAVEL KURFÜRST, BRNO

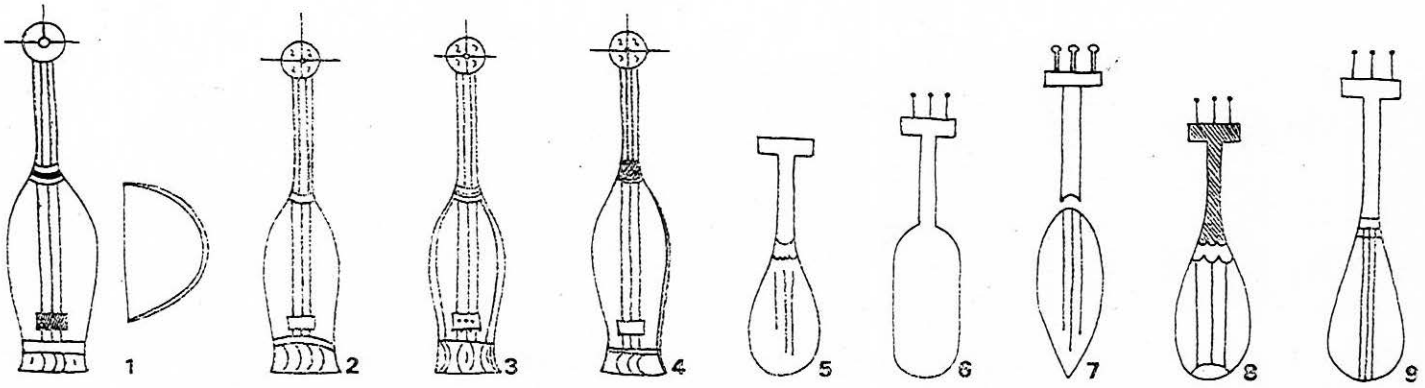
Versuch einer organologisch-ikonographischen Analyse der spanisch-maurischen Fidula

Einleitung

Die modernen Museumexposition können auf gute Rekonstruktion von Musikinstrumenten nicht verzichten, sei es wegen der Beschädigungsmöglichkeit oder deshalb, weil das auszustellende Instrument nich existiert und seine Form nur aus ikonographischen oder schriftlichen Quellen bekannt ist. Wir haben versucht, am Beispiel eines erst jüngst verschwundenen Volksmusikinstruments zu beweisen, dass Rekonstruktionen nicht mehr existierender Instrumente möglich sind, wenn eingehende Kenntnisse ihrer. Entwicklung und Parallelen aus dem Stimusik- und Volksmusikinstrumentarium zur Verfügung stehen. Die vorliegende Studie knüpft an die systematischen Arbeiten der organologischen Arbeitsstätte in Brünn an, deren Ergebnis bereits in einer Reihe von ideellen Rekonstruktionen nicht erhalten gebliebener Musikinstrumente vorliegt.

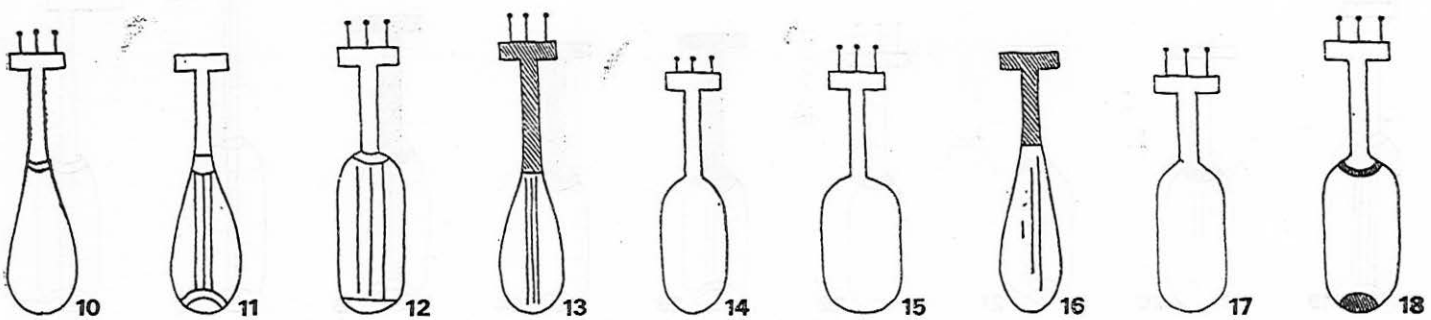
I.

Auf dem gegenwärtigen Stand der organologischen Untersuchungen kommt der Forscher zur Ansicht, dass die Entstehung aller Musikinstrumente an fünf grund-

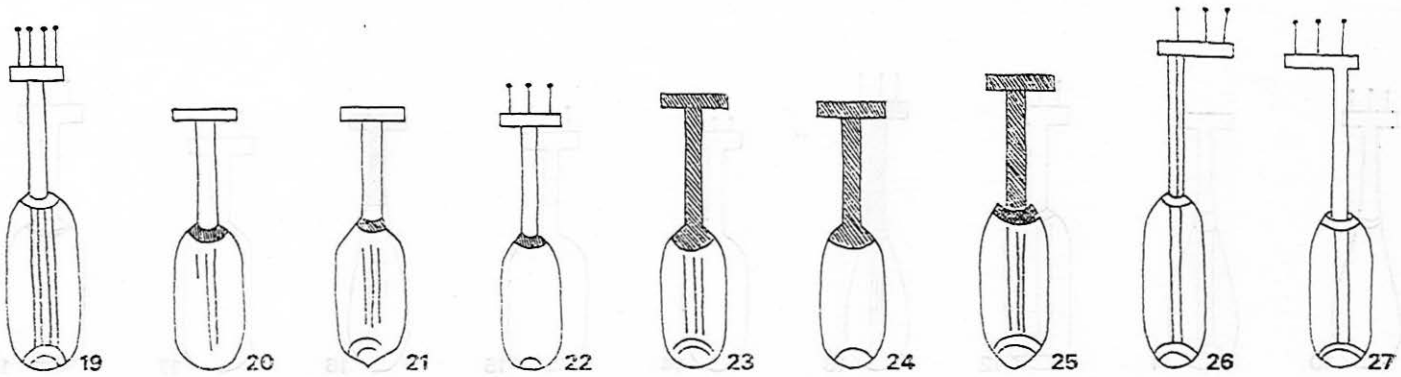


legende Elemente gebunden war, aus denen sich die einzelnen Instrumentengruppen entwickelt haben. So gut wie überall waren die natürliche Bedingungen gegeben, welche die Existenz dieser Elemente ermöglichten: Stange oder Stein, Membran, Faser, Röhre und Plättchen, die in der Hand des Menschen in noch unbearbeitetem Zustand den Beginn der Entstehung von Idiophonen, Membranophonen, Chordophonen und Aerophonen — kurz aller Musikinstrumente bedeuteten. Ihre weitere technische Bearbeitung, die Prototypen, Archetypen und Typen entstehen liess, hat sich nirgendwo unterschieden. Erst die Stenotypen mit ihren eventuellen Argottypen konnte sich in verschiedenen Gebieten, Zivilisationen und Kulturen unterschiedlich entwickeln — und taten dies auch. Es ging vor allem um Unterschiede der Formen, d.i. der Konstruktionen, keineswegs um verschiedene Konzepte; diese waren und sind bis heute von der Eindeutigkeit der technischen Entwicklungsprinzipien der Musikinstrumente gegeben.

Es ist wahr, dass die Entwicklung bestimmter Instrumente in verschiedenen Gegenden der Welt zeitliche Unterschiede erkennen lässt. Während die Ausgangselemente in einem Gebiet noch nicht einmal das Stadium des Prototyps erreicht hatten, existierten in anderen Gebieten bereits reife Stenotypen. Andererseits war es praktisch die Regel, dass nahestehende oder gleiche Zivilisationsstufen ähnlich oder sogar identisch entworfene Stenotypen der Musikinstrumente hervorgebracht haben. Der Umstand, dass diese irgendwo früher, anderswo später (oft mit Unterschieden von Jahrtausenden) erschienen sind, bedeutet noch nicht, dass man eindeutig und im jeden Fall von Übertragungen sprechen kann. Die Entwicklungsgesetzlichkeiten möchten eben zu verschiedenen Zeiten und in verschiedenen Räumen unabhängig voneinander zu denselben Ergebnissen führen. Umgekehrt bedeutet die zeitlich parallele Entwicklung ähnlicher Stenotypen noch nicht, dass zwischen diesen gegenseitige Beziehungen geherrscht haben mussten. Die Tatsache, dass es auch bei Musikinstrumenten zu Migrationen und Infiltrierungen von einem Gebiet in das andere gekommen ist, lässt sich allerdings nich bestreiten. Die Übertragungen waren meist von Umbildungen der Stenotypen begleitet, die vor allem auf die Beeinflussung des neu angekommenen Instruments durch ein ähnliches Instrument zurückgingen, das schon lange zu dem Gastmilieu gehörte oder in diesem sogar entstanden war. Diese ein- oder gegenseitige Beeinflussung musste gesetzmässig zu mehr oder weniger starken Vereineitlichungen und Einförmigkeiten führen, die noch heute viele Forscher zu eindeutigen Folgerungen über die vorbehaltlose Übernahme von Musikinstrumenten verleiten, beispielsweise europäischer Musikinstrumente aus dem Orient.



Gegen die hartnäckig überlebende Ansicht von der Übernahme der meisten europäischen Musikinstrumente aus Importen, ihrer Allochthonie, stellen wir die Ansicht ihrer Autochthonie, seien sie auch im Laufe der Entwicklung ab und zu von fremden (selbsverständlich auch orientalischen) Einflüssen geformt worden. Wir schliessen uns somit im Grunde genommen der Theorie über die räumlich und zeitlich unabhängige Entstehungsmöglichkeit der gleichen oder ähnlichen Erscheinungen an. Die Aufeinanderfolge der Entwicklung aller Musikinstruments geht demnach von Elementen aus, wie es beispielsweise die Saite der Chordophone gewesen ist. Eine dauernde und meist einzweckige musikalische Verwendung erlangten jedoch diese Instrumente erst, als nebeneinander drei Instrumenten-Prototypen entstanden sind — der Musikbogen, die Musikstange und die an einem Ende befestigte Saite. Die Lebensfähigkeit dieser Prototypen, sogar in den Elementarformen, beweisen bis heute die Musikinstrumentarien primitiver Völker, Beachten wir doch die fundamentalen Unterschiede zwischen den beiden zuerst genannten Prototypen! Bei dem Musikbogen ist die Saite „zwischen etwas" — d.i. zwischen die Enden einer elastischen Stange (Bogen) gespannt, die sich durch ihre Spannung krümmt. Der federnde Bogen erhält die Saite ununterbrochen in Spannung. Bei der Musikstange wird die Saite „auf etwas", d.i. auf eine unelastische, unbiegsame Stange gezogen, die sich nicht einmal nach dem Aufziehen der Saite krümmt. Deshalb muss die Saite durch Unterlegen oder Zug gespannt werden. Beide Prototypen entstanden also durch Anwendung zweier verschiedener Prinzipien — das Spannen und Aufspannen der Saite als praktischer Anwendung des Ausgangselements. Die klangliche Unergiebigkeit der beiden Prototypen wurde in der folgenden Entwicklungsphase durch Hinzufügen geeigneter Resonatoren ausgeglichen. Auf der Basis von Prototypen entstanden somit zwei grundlegende Archetypen: der an einem Ende mit einem Resonator versehene Musikbogen und die Musikstange mit Saite, von einem Resonator unterlegt, der die Funktion eines Verstärkers und einer Streckvorrichtung zugleich versah. Aus dem Archetyp des Musikbogens lässt sich die Entstehung zweier (von fünf) bereits nicht mehr federnder Grundtypen der Chordophone ableiten — der Harfe und der Lyra. Die weiteren drei — ein volles oder hohles Prisma mit Saite, später vom Stenotypes des Monochords vertreten, eine volle oder hohle Platte mit Saiten und das von uns vorläufig hypothetisch Ravanostron genannte Instrument — leiten wir vom Archetyp der Musikstange ab. Die fünf Haupttypen der Chordophone stellen gegenüber den klangarmen Archetypen einen beträchtlichen Qualitäts-



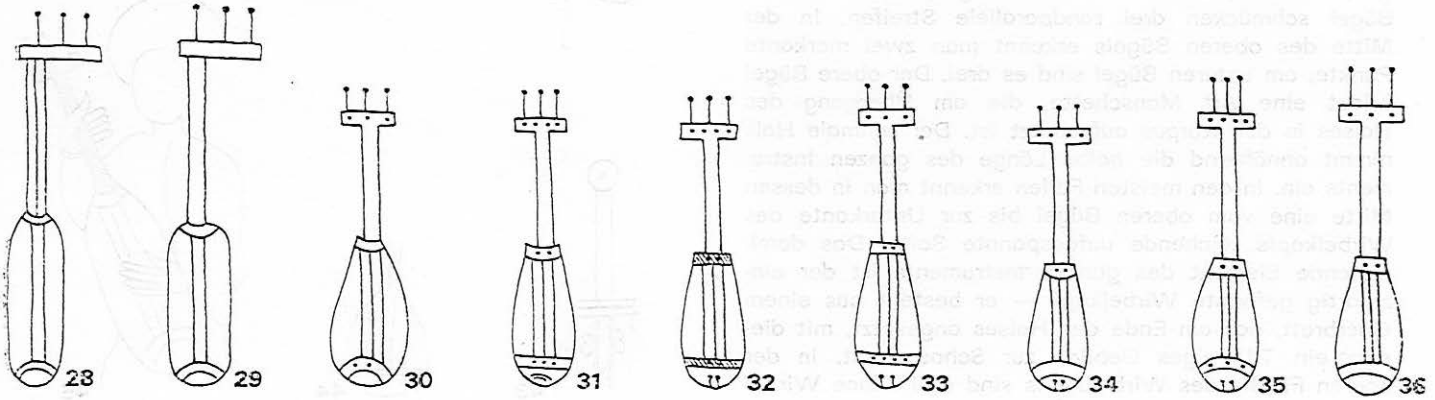
sprung der Entwicklung vor, der von der Verbindung ihrer bereits relativ hohen Lautstärke mit dem reicheren Tonregister repräsentiert wird. Von ihnen aus entfaltet sich die Genesis der Stenotypen, Argottypen, vorübergehender Intertypen und auch ausnahmsweise vorkommender Monotypen bis in die heutige Zeit. Die Weiterentwicklung der Chordophone zielte vor allem auf die Bereicherung der tonlichen Möglichkeiten und nicht zuletzt auf die Vereinfachung ihrer Beherrschung. In den letzten Entwicklungsphasen tritt von Mittelalter beginnend noch das Bemühen hinzu, den Klang nach den Kriterien und dem in bestimmten Zeiten und Gebieten herrschenden Geschmack zu veredeln.

II.

Die Forscher, die sich mit den eigenartigen spanisch-maurischen Chordophonen der Pyrenäenhalbinsel aus dem neunten bis zwölften Jahrhundert näher befasst haben (Sachs 1940, 274; Panum 1971, 372—3; Bachmann 1966, 41), stimmen in der Ansicht überein, dass jenes in dem Miniaturen des Kodex „Beati commentarius" so häufig abgebildete Instrument in der dargestellten Form niemals existiert hat. Ihre Ansicht stützt sich vor allem auf den Saitenbezug, der mit dem Spannwirbelsystem des Instruments nicht zusammenhängt — obwohl die Zahl seiner Wirbel fast immer der Zahl der abgebildeten Saiten entspricht. Anscheinend endeten mit der erwähnten Feststellung ihre Untersuchungen dieses bemerkenswerten spanisch-maurischen Instruments, ohne dass man jemals zu genaueren Analysen der betreffenden Ikonogramme geschritten wäre.

Deshalb sammelte ich dreiundvierzig Ikonogramme aus elf Quellen und studierte sie eingehend. Obwohl es sich zum grossen Teil um Kopien eines damals bereits fixierten ikonographischen Schemas handelt, ist es meiner Ansicht nach unmöglich, dass diese Instrumente einfach erfunden wären. Es konnte nicht einmal um Instrumente gehen, die die Maler-Kopisten ins Absurde transformiert hätten, weil sämtliche abgebildete Instrumente auch in jenen Fällen, wo es nachweislich weder um blosse Kopien noch um die einfache Auswertung eines ikonographischen Schemas geht, eben jene Ausstattung erkennen lassen, die zur Ansicht ihrer Unwahrscheinlichkeit geführt hat.

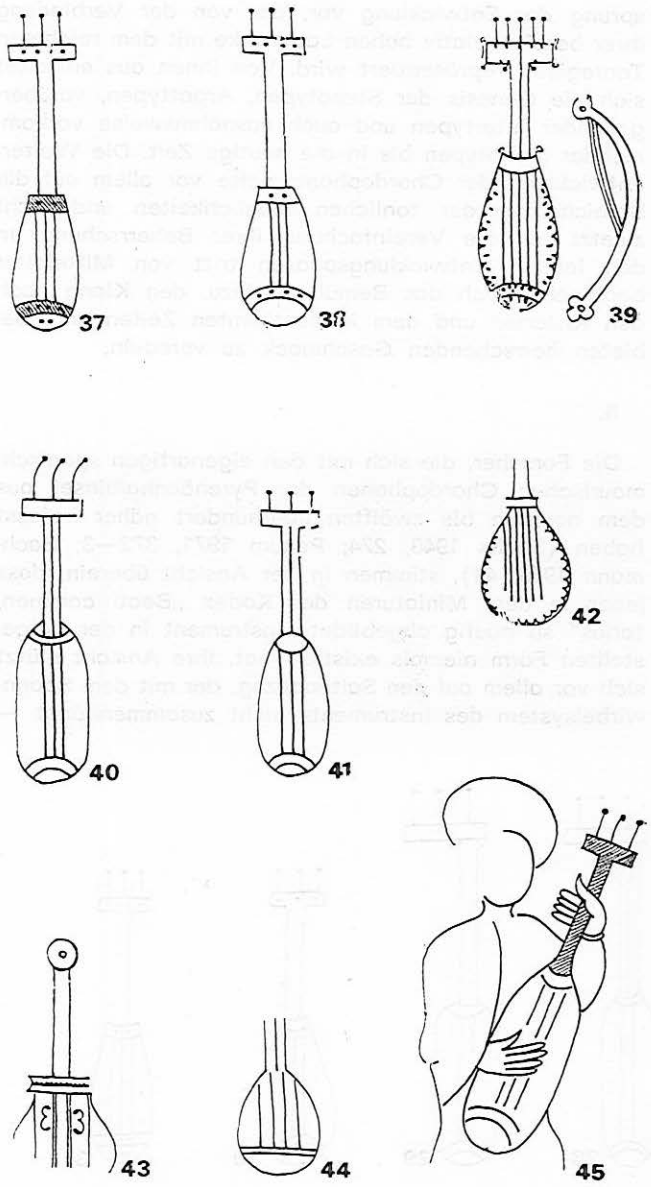
Die ältesten bekannten Abbildungen (Abb. 1—4) stammen etwa aus den Jahren 920—930, also einer Zeit, als die Pyrenäenhalbinsel bereits zwei Jahrhunderte (seit dem Jahr 711) von den nordafrikanischen Mauren, meist Mischlingen der Araber und Berber, beherrscht wurde. Ihr langfristiger und starker Einfluss führte zur Entstehung des sogenannten maurischen

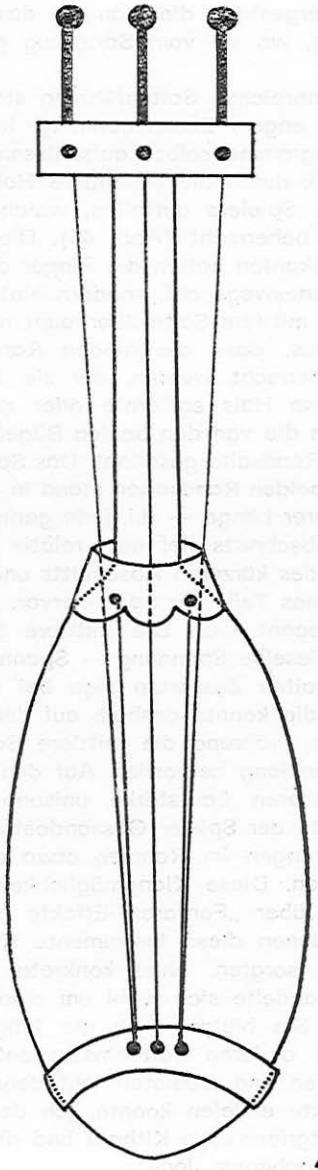


Stils, dem fast alle untersuchten Ikonogramme zuzuteilen sind. Ausnahmweise begegnet man ihnen zwar auch in Fällen, die mit der Pyrenäenhalbinsel und dem maurischen Stil nicht zusammenhängen, jedoch trotzdem zumindest örtlich und zeitlich der damaligen Sphäre des islamischen Kultureinflusses angehören (Abb. 42, 43, 44). Ihre Ikonogramme (Abb. 1, 2, 3, 4, 42, 43, 44) unterscheiden sich nur in Einzelheiten von den übrigen sechsunddreissig Darstellungen, die aus dem Gebiet des heutigen Spanien und dem zehnten bis zwölften Jahrhundert stammen.

Bei der Analyse der Ikonogramme dieser spanisch-maurischen Instrumente gehe ich von der oft bewährten Tatsache aus, dass Musikinstrumente auf mittelalterlichen Miniaturen umso weniger Einzelheiten verraten, je kleiner und einfacher sie abgebildet werden (Kurfürst 1985, 6). Man darf somit auch die Abbildungen der spanisch-maurischen Fidula nicht als vollendet getreue Darstellungen dieser Instrumente betrachten!

Bei allen weiteren Erwägungen ging ich vom sogenannten Durchschnittsinstrument, also jenem Instrument aus, dass alle typischen Elemente, das sind die Elemente mit der höchsten Vorkommensfrequenz, auf bekannten Darstellungen aufweist. Dieses Instrument besitzt einen ellipsen- bis tropfenförmigen Korpus, an dessen oberem und unterem Teil bogenförmige Bügel hängen, zwischen denen drei Saiten gespannt sind. Die Bügel schmücken drei randparallele Streifen. In der Mitte des oberen Bügels erkennt man zwei markante Punkte, am unteren Bügel sind es drei. Der obere Bügel bildet eine Art Manschette, die am Übergang des Halses in den Korpus aufgesetzt ist. Der schmale Hals nimmt annähernd die halbe Länge des ganzen Instruments ein. In den meisten Fällen erkennt man in dessen Mitte eine vom oberen Bügel bis zur Unterkante des Wirbelkopfs reichende aufgespannte Saite. Das dominierende Element des ganzen Instruments ist der einzigartig geformte Wirbelkopf — er besteht aus einem Querbrett, das am Ende des Halses angesetzt, mit diesem ein T-förmiges Gebilde zur Schau stellt. In der oberen Fläche des Wirbelbretts sind drei dünne Wirbel





46

eingesetzt, deren lange „Stengel" von kugelförmigen Köpfchen beendet werden. An der Vorderfläche des Wirbelbretts erkennt man markante Punkte, ebenso wie auf den Bügeln des Korpus, deren Zahl den Wirbeln und Saiten entspricht. Die Wirbelbrettbreite ist etwa so gross wie die halbe Halslänge, so dass die relativ weit von der Halsachse entfernten Randwirbel in konstruktiver Hinsicht keinen Sinn zu besitzen scheinen. Der eigenartige Wirbelkopf legt die Ansicht nahe, ihn für ein Überbleibsel des Jochs der Lyrainstrumente zu halten, die offenbar an der Wiege dieses bemerkenswerten spanisch-maurischen Chordophons standen: Es handelt sich im wesentlichen um eine Lyra, deren beide Arme zu einem Arm verschmolzen und das Joch in der Mitte stützten. Dieser Aspekt des untersuchten Instruments erleichtert in vielem weitere Erwägungen, ebenso wie die Erfahrungen mit dem „Lesen" musikalischer Ikonogramme des Mittelalters.

Das System der Wirbel im Bügel-Joch und deren Form unterscheidet sich nicht wesentlich von den Wirbeln auf einer Reihe von Lyra-Abbildungen aus dem frühen Mittelalter (Bachmann 1966, Abb. 25; Panum 1971, Fig. 73). Zahlreiche Ikonogramme aus dieser Zeit stellen die Saiten bei Rahmeninstrumenten überhaupt nicht dar, wenn diese vom Material des Instruments nicht „unterlegt" sind (Bachmann 1966, Abb. 89; Panum 1971, Fig. 104, 194; Kinsky 1929, S. 35, Abb. 9). Mit einer solchen Praxis der mittelalterlichen Illuminatoren können wir aller Wahrscheinlichkeit nach jenes rätselhafte „Verschwinden" der Saiten (Panum 1971, 372—3) zwischen dem Wirbelkopf (besonders dessen Randwirbeln) und dem Korpus der spanisch-maurischen Instrumente erklären. Als diese Art der Darstellung in der Skriptorien der Pyrenäenhalbinsel sozusagen verbindlich wurde — dies war annähernd knapp nach der Entstehung des ältesten bekannten Ikonogramms aus den Jahren 920—930 der Fall (Abb. 1, 2, 3, 4) — hat man solche Instrumente nur mehr mit der scheinbar unlogischen und unkompletten Ausstattung abgebildet, welche die Organologen zu der eingehend erwähnten Behauptung führte. Nun bleibt es noch übrig, eine annehmbare Hypothese der theoretischen Konstruktion

(Abb. 46) und Spieltechnik des in Frage stehenden Instruments aufzustellen.

Wenn man auf allen zugänglichen Abbildungen die Formung der Bügel (Manschetten) am Instrumentenkorpus verfolgt, stellt man fest, dass diese in manchen Fällen gerade sind; in anderen Fällen ist der eine Bügel gerade, der andere durchgebogen, und auf dem Grossteil der Ikonogramme sind beide Bügel gegen die Mitte der Korpusdecke zu durchgebogen. Manchmal findet man die unteren geraden Bügel mit Hilfe irgendeiner Schnürung oder Bindung gegen die Richtung des Saitenzugs gesichert und gewissermassen ausgerichtet (Abb. 1, 2, 3, 4, 32, 33, 34, 35). Daraus schliesse ich, dass die beiden Bügel durch die Spannung des Saitenbezugs zusammengezogen und dadurch bogenförmig deformiert wurden. Die beiden Randsaiten hat man von den Randwirbeln direkt an den unteren Bügel gespannt. Am grösseren Abschnitt dieses Verlaufs waren sie von Instrument nicht „unterlegt" und wurden deshalb auch nicht abgebildet. In den Öffnungen (zwei markante Punkte) des unteren Bügels wurden sie festgehalten und in entgegengesetzter Richtung zum oberen Bügel gezogen, wo sie enden (zwei markante Punkte der oberen Manschette). Die mittlere Saite verläuft parallel zur Halsachse an der Vorderfläche des Halses, unterzieht die obere Manschette, setzt sich über dem Korpus (parallel zu den wiederkehrenden Randsaiten) zum unteren Bügel fort, an dem sie eingehängt ist und endet (mittlerer markanter Punkt im Unterbügel). Die Randsaiten sind also fast doppelt so lang wie die mittlere Saite. Ihre produktive (klingende) Länge ist jedoch um mehr als die Hälfte kürzer als jene der mittleren Saite. Um das Vibrieren der mittleren Saite zu ermöglichen, trotzdem sie unter dem oberen Bügel verläut, musste dieser von irgendeinem „Steg" mit einer Öffnung gehoben werden, die diese Saite frei durchzog. Durch das Anheben des oberen Bügels gelangten auch die beiden Randsaiten fast in eine Ebene mit der mittleren Saite, so dass es möglich war, alle drei gleichzeitig nicht nur durch Zupfen sondern auch mit einem Bogen in Schwingung zu bringen (Abb. 1, 2, 3, 4, 39). Die Bügel wurden höchstwahrscheinlich aus starken Lederstreifen hergestellt, die man um das Schmalende des Korpus zog, wo sie vom Saitenzug gehalten wurden.

Mit dieser sinnreichen Saitenführung stand auch die Spieltechnik in engem Zusammenhang. In dieser Hinsicht die Ikonogramme selbst aufschlussreich, die auf den ersten Blick durch die besondere Haltung der linken Hands des Spielers auffallen, welche die Saiten im Halsbereich beherrscht (Abb. 45). Die meisten abgebildeten Musikanten halten die Finger der gedrehten linken Hand keineswege auf, sondern hinter dem Hals, so dass sie die mittlere Saite überhaupt nich berühren. Ich setze voraus, dass die beiden Randsaiten vom Musikanten beherrscht wurden, der sie in der Handfläche hielt, vom Hals entfernte oder zueinanderzog. Dadurch wurden die von den beiden Bügeln begrenzten Abschnitte der Randsaite gespannt. Das Spannen beider Teile jeder der beiden Randsaiten stand in umgekehrtem Verhältnis zu ihrer Länge — d.i. jede geringe Änderung des längeren Abschnitts rief eine relativ starke Spannungsänderung des kürzeren Abschnitts und damit auch der Frequenz jenes Teils der Saite hervor, die zwischen die Bügel gespannt war. Die mittlere Saite behielt dabei ständig dieselbe Spannung — Spannungsänderungen der Randsaiten äusserten sich bei ihr praktisch nicht. Die Melodie konnte deshalb auf den Randsaiten gespielt werden, während die mittlere Saite den monotonen Bourdonklang hervorrief. Auf den offenbar im Sinne der grösseren Lautstärke unisono gestimmten Randsaite konnte der Spieler Glissandoeffekte und laufende Tonänderungen im Rahmen etwa eines Sextenintervalls erzielen. Diese Klangmöglichkeiten verleiten zu Erwägungen über „Fanfaren"-Effekte bei festlichen Anlässen, bei denen diese Instrumente für eine feierliche Stimmung sorgten, ohne konkrete Melodien zu spielen — es handelte sich wohl um eine Art stabiler „Musikkulisse". Sie bieten auch die Möglichkeit von Vergleichen mit anderen Saiteninstrumenten aus verschiedenen Zeiten und Gebieten, auf denen man ähnliche Klangeffekte erzielen konnte. Ich denke hier vor allem an die altgriechische Kithara und die „Utrechter Lyra mit unterbrochenem Joch".

Was die Korpuskonstruktion des spanisch-maurischen Instruments anbelangt, kann man nach den regelmässigen Frontalabbildungen schliessen, dass der Korpus einen gewölbten, ausgestemmten Boden besass und mit Pergament bedeckt war (wie die Abwesenheit jeglicher Schallöffnungen vermuten lässt). Aus Gründen der mechanischen Stabilität hat man den Hals wahrscheinlich aus einem Stück Holz, gemeinsam mit dem Boden des Korpus hergestellt.

Literatur:

Bachmann, W.: Die Anfänge des Streichinstrumentenspiele. Leipzig 1966.

Kinsky, G.: Geschichte der Musik in Bildern. Leipzig 1929.

Kurfürst, P.: Ala und Harfe mit zwei Resonatoren – unbekannte Instrumente der europäischen Stilmusik des 13. bis 15. Jahrhunderts. Musikverlag Katzbichler, Frasdorf 1985.

Panum, H.: Stringed Instruments of the Middle Ages. Neudruck London 1971.

Sachs, C.: The History of Musical Instruments. New York 1940.

Abbildungen:

1 – 4
Handschr., S. Beati de liebana explanation in apokalypsis S. Johannis, Biblioteca Nacional Madrid, Hh 58, fol. 127 r. Um 920 – 930 in Spanien entstanden.

5 – 18
Handschr., S. Beati de liebana explanation in apokalypsis S. Johannis, Biblioteca Provincial Universitaria de Valladolid. Spanien 970.

19
Handschr., Codex Beati commentarius, Biblioteca Nacional Madrid. Spanien 10. Jh.

20 – 29
Handschr., S. Beati de liebana explanation in apokalypsis S. Johannis, Biblioteca Nacional Madrid, B 31. Spanien 1047.

30 – 38
Handschr., Commentarius in Apokalypsin, British Museum zu London, Add. MS 11695. Spanien 11.Jh.

39
Handschr., S. Beati de liebana explanation in apokalypsis S. Johannis, British Museum zu London, Add. MS 11695, fol. 86. Zwischen 1073 – 1091 in Santo Domingo beendet.

40
Handschr., Cantigas de S. Maria. Nach Panum. Spanien 11.Jh.

41
Beatus-Handschrift, British Museum zu London. Add. MS 11695 Spanien circa 1109.

42
Malerei auf Bruchstücken von Tongefässen, Museum für islamische Kunst Kairo, Inv. Nr. 5395/5. Ägypten 10./11. Jh.

43
Freskomalerei an der Decke der Coppella Palotina in Palermo. Sicilien 12.Jh.

44
Druckstock, Staatliche Museen Berlin, Islamisches Musuem, Inv. Nr. I. 4369.

45
Beatus-Handschrift aus Valladolid.

46
Rekonstruktion des Instruments.

Contributions to the Study of Traditional Musical Instruments in Museums

Pre Slovenské národné múzeum v Bratislave vydalo
Vydavateľstvo Obzor v Bratislave

Predseda edičnej rady SNM Dr. Alojz Habovštiak, CSc.
Odborný redaktor Dr. Ivan Mačák

Vytlačili Tlačiarenské závody Pravda v Bratislave
A/219/86
Nepredajné!