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AUSTRALIAN GROUP STUDIES SOUND LEVELS PROBLEM

Australian surgeon Hunter J. Fry writes to tell us about the Performing Arts Medicine Society and to share his thoughts about the problems of sound-induced hearing loss. Dr. Fry will participate in a panel discussion on medical problems of musicians, a feature of the 1985 ICSOM conference.

The Performing Arts Medicine Society was formed late in 1983 as a section of the Australian Medical Association in Victoria, Australia. The aim of the society is to study the occupational maladies of performing artists, of which dancers and musicians form the largest groups. As it happens, all the doctors on the committee are themselves musicians, two of them professional and the others amateurs. While a good deal of knowledge had been gained about ballet injuries, there was no equivalent for music as interest was new. The committee decided that a survey should be carried out at two levels: first at tertiary (university) music schools and second among performing musicians from symphony orchestras. Regular clinics were held at two university music schools. To date, eight tertiary music schools and six symphony orchestras, the Los Angeles Philharmonic being the most recent, have been surveyed.

An unexpectedly high incidence of overuse injuries was found; these were similar to those produced by keypunching, use of word processors, and other repetitious types of activity in industry. These were directly attributable to the excessive repetitious muscular activity and static muscular and ligamentous loading involved in music-making. Such injuries are largely preventable. Once they occur, the outlook for the musicians (university students particularly) was greatly worsened if they kept practicing. Total avoidance of all pain-inducing activities was the only treatment that worked. Unless this was done, lesions could lapse into a chronic unhealed state, persisting often for years. We believe that an urgent education program is required with the aim of preventing this unfortunate situation. Our publications to date have been largely in music journals for that reason.

Sound-Induced Hearing Loss

As a doctor and a music lover, I put forward a plea that the term "noise-induced hearing loss" be abandoned. Sound is the general term, and the symphony orchestra makes some of the loveliest sounds we know. There are some sounds we do not like, and noise is the worst kind of sound, "the garbage of sound," the by-product of factory operations and the like. When the term was originally coined in Britain, it was noise that was causing deafness in this situation. The musician produces sound, and excessive volumes of even this lovely kind of sound can produce auditory overload.

Volume levels have grown during music performance history. The "big sound" was established in Beethoven's time. Mahler and Richard Strauss wrote on an even larger scale. Today some composers write for (literally) a double orchestra. Concert halls today require a big sound for large audiences. That music listeners seem to want a big sound is apparent from the sound equipment music lovers buy for home use. Small groups of mu-

sicians playing popular or rock music are now amplified so much that they may be unable to monitor their own playing.

Is sound level really important? Is the acute discomfort some people feel from loud music related to ear damage? Is damage possible though high sound levels are tolerated? Our survey evidence indicates that, except for the third question, the answer is yes. It's important to separate discomfort, which may be almost intolerable, from damage, which may occur unrecognized. The two may coexist or they may exist separately. The medical literature in the last 10 years abounds with verified reports of inner ear damage from high sound levels. Auditory perception is blunted and impaired for communication as well as for music, and physical capacity is reduced.

Overuse injury is brought about by exceeding the upper biological tolerance of living tissues. All our tissues have such an upper limit which is genetically determined and which varies in individuals. However, the tissues of even the most genetically robust individual will break down if the stress is great enough. There are many common examples. Excessive light may cause damage to the lens of the eye or even to the retina. If a muscle group pulls too hard, or if gravity loading is excessive, a bone may break. Skin stressed too much will give way. A muscle which is overused may break down, causing pain and loss of strength. Ligaments holding bones together may break down under excessive load and become painful. Damage due to excessive sound levels falls into the category of overuse injury.

There are several options for dealing with this problem.

 Sound levels can be reduced by reducing the size of the orchestra. This lessens the problem but does not eliminate it. For artistic reasons, this option is unlikely to be developed.

• The brass can be placed on risers to spare the musicians

who sit in front of them. This is commonly done.

 Deflecting baffles can be used to modify sound transmission and cut out extremes of sound levels.

· Personal baffles behind the players head may give considerable protection. Although musicians might at first find them cumbersome, such baffles have some promise and deserve de-

velopment and fair trial.

• The most exciting possibilities lie in modification of the auditory signals to the individual musicians. Auditory signals reach the musician, (or any listener) by air conduction and bone conduction (through the skull itself.) Simply blocking the ears (and therefore air conduction) demonstrates clearly that air conduction, not bone conduction, is responsible for the transmission of high sound volume. If technology were developed to modify the sound passing through the ear canal to the ear drum in an appropriate and suitable way, the problem could be solved. There is absolutely no reason why this cannot be achieved. Two types of modifications are possible.

The first is passive sound modification. A filter must be fitted to the external ear to reduce the level of incoming sound in such a way as to preserve quality and balance. The musician must still be able to hear the orchestra, hear the conductor in rehearsal, and monitor his own playing. This technology will not be developed unless there is expression of concern from the

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SOUND LEVELS (Continued from Page 1)

musicians, a willingness to adjust to the new situation, and understanding of the need for damage prevention. Ear plugs are the forerunners, now increasingly used. The ear plugs of the future will not reduce low volume transmission but will respond to greater volumes of sound in proportion and without loss of quality.

Active sound modification would involve sending idealized input to each ear. Small headphones would delete external sound and provide, say, the orchestral sound heard from the conductors podium in one ear and the player's own sound against the orchestral background in the other. Separate volume controls for the two sides would be required.

The time has come for the development of this technology. The impetus for this should be the recognition and acceptance of the real risk of auditory overuse injury while playing in a symphony orchestra. There is no theoretical barrier to solving the high sound levels problem. We hope to see the necessary technology develop.

Hunter Fry, M.S., I.R.C.S., F.R.A.C.S.

ICSOM OFFICER PROFILES or

WHO ARE THOSE PEOPLE, ANYWAY?

FREDERICK ZENONE, ICSOM CHAIRMAN



Frederick Zenone has been ICSOM chairman since 1980, having served two years as Eastern area vice-chairman and two years as ICSOM vice-chairman. A graduate of Indiana University, Fred has been a cellist with the National Symphony Orchestra since 1969 and plays with other NSO members in the Euterpe Chamber Players. He was a member of the orchestra panel of the National Endowment for the Arts from 1980 to 1983, assuming the

from 1980 to 1983, assuming the position of co-chairman in his final year. When time allows, Fred indulges his passions for tennis and for fly fishing. He and wife Pat have three sons and recently became grandparents for the first time.

MELANIE BURRELL, ICSOM PRESIDENT



Cellist with the Denver Symphony since 1964 and Denver's ICSOM delegate since 1971, Melanie Burrell has been active on many DSO committees and negotiating teams and is secretary and trustee of the orchestra's jointly administered retirement fund. She served as ICSOM treasurer in 1983-84 following eight years as Western area vice-chair. Melanie received her B.A. from Vassar and also studied at Juilliard, Kansas State, and the Mo-

zarteum in Salzburg. She and husband Charlie, a bassist with the DSO, combine a family of eight children. Gardening, refinishing antiques, doing needlework, and spending time in her mountain shack retreat are her favorite activities.

NANCY GRIFFIN, SECRETARY



Bassist with the Seattle Symphony Orchestra since 1961, Nancy Griffin received her B.A. from the University of Redlands. A student of James Vrhel of the Chicago Symphony and of Georges Moleux at the Berkshire Music Center, Nancy has played with the Northwest Chamber Orchestra, the Carmel Bach Festival Orchestra, and at other music festivals. She has been a member and chairperson of the Seattle Symphony committee and an

Symphony committee and an ICSOM delegate from 1975 until 1980, when she became ICSOM secretary. Since 1982 she has been a member of the NEA orchestra panel. Nancy has two daughters, both in college, and is an avid animal lover, training dogs—and tortoises!

PENNY ANDERSON, TREASURER



Penny Anderson is a graduate of Smith College and the Juilliard School. She held a teaching scholarship in viola at Juilliard while substituting at the Metropolitan Opera and subsequently taught at the Oberlin Conservatory for two years. Violist with the Pittsburgh Symphony Orchestra since 1980, she also performs as a member of the Pittsburgh Quartet. Penny has been the Pittsburgh ICSOM delegate for three years and has been an ac-

tive member of the PSO orchestra committee and chairman of the players committee. She is also on the board of the Pittsburgh chapter of the American Civil Liberties Union. A nationally ranked distance runner in high school, Penny now enjoys running, back-packing, and hiking in her spare time.

TOM HALL, EDITOR OF SENZA SORDINO



Tom Hall received all his formal music education in his home town of Tallahassee, earning two degrees in violin performance at Florida State University. Following a stint in the US Army Strings, he played with the Cincinnati Symphony for a season before joining the Chicago Symphony in 1970. He was a founder of the Meridian String Quartet and a long-time member of the Chicago Arts Quartet, and he has served regularly on the

CSO members committee and audition committee. Senza Sordino editor since 1982, Tom collects minerals, stamps, coins, paintings, and art glass.

Photos of Fred Zenone and Tom Hall by Barbara Cotell, Washington. DC; photo of Nancy Griffin by Hank Kranzler, Seattle WA; photo of Melanie Burrell by Important Occasions Photography, Denver CO; photo of Penny Anderson by Richard Field, Baltimore Symphony Orchestra.

FEEDBACK

I recently conducted a thorough review of the many letters I have received during the last three years, of my survey of delegates at annual conferences, and of my surveys of subscribers at the time renewal notices were sent out.

During this process I was often reminded of an incident at a Chicago Symphony recording session. During playbacks, conductor Daniel Barenboim was constantly approached by principals from the orchestra expressing concern that they or their sections could not be sufficiently well heard. Barenboim finally announced to everyone in the room, "When the woodwinds tell me the strings are covering them up, and the strings complain that the brass are too loud, and the brass say their solos aren't cutting through the other winds, I know I have found the right balance!"

Well, I'm not sure I have found the right mix and treatment of topics in *Senza Sordino*, but I do find that what some enjoy others would just as soon do without. For example, there are conflicting requests for more and fewer humor and color articles; more and fewer individual success stories, human interest articles, and personality sketches. Many readers express appreciation for the variety of topics we address.

Most persons (but not all) want ever more information about orchestra management-labor relations, contract negotiations and settlements, grievances, benefits, salaries and working conditions. Such information is especially desired by ROPA and other non-ICSOM orchestra members. A professor of arts administration and labor relations assures us our newsletter is an important and highly credible source of such information. One journalist would welcome an entire issue devoted to the chart of wages and working conditions; we used to do that, but the AFM now provides a very comprehensive chart which would be pointless to duplicate in *Senza Sordino*. One reader prefers more Denver-type news; would that we had more such stories about successful cooperative management-labor negotiations!

A topic which many readers ask us to address is professionally related health and medical problems, especially sound-induced hearing loss and the use of beta-blockers; we have responded by supplying much coverage this season. There seems to be an increasing interest in quality-of-life issues and not just in bread-and-butter, dollars-and-cents labor issues.

A librarian subscriber makes the excellent suggestions that ICSOM arrange for some central storage and preservation of its archival materials.

One reader urges that ICSOM become more independent within its affiliation with the AFM and asks if we "have the guts to move that way." No doubt ICSOM relations with the AFM will come under scrutiny at the annual conference, which will focus on musicians' representative organizations.

A professional journalist suggests we offer more debate, showing both sides of management-labor issues. We have moved more in this direction and away from the one-sided polemics of several years ago which bothered a number of readers, delegates, and ICSOM officers. A few years ago, one orchestra manager wrote to assure me that "not all management people are hostile to ICSOM!" I believe we now present a more mature posture.

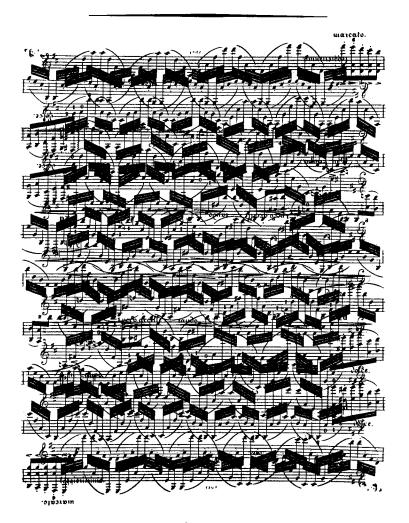
Often readers ask for some things we simply are not chartered to or able to provide. Why not have ads? We used to, believe it or not, but we presently consider it inappropriate to offer space to commercial enterprises. To our Canadian sub-

scribers who wish we would print more about Canadian orchestras, we highly recommend the OCSM Newsletter, excellently edited by Murray Ginsberg. For those who request more information about the functioning of boards and managements and about news of symphony schedules and artistic activities, we suggest the American Symphony Orchestra League's Symphony Magazine, which we have arranged to provide to our ICSOM orchestras. And why don't we print more musicians' views? I'd love to, but the cards and letters haven't exactly been pouring in, despite encouragement at every conference.

There are often requests for expanded size and more frequent issues, one every month or fortnight. Some subscribers are probably not aware that we use our bulletin system, not Senza Sordino, for fast dissemination of information. In these pages we have tried to provide succinct and focused articles rather than a rambling open forum. A multi-year subscription period poses bookkeeping problems for our vast circulation staff (me), so we stick with the current single-year (October-August) subscription. Incidentally, we probably will have one domestic subscription rate next year, ending the increasingly problematic AFM and non-AFM rates now in effect.

And finally, to those who said they find ours a valuable, helpful, useful, and informative publication and encouraged us to keep up the good work: Thanks. We'll try.

Tom Hall



Sight-reading

SETTLEMENT SUMMARIES

Settlements are reported in greater detail in the ICSOM bulletins which are sent immediately to member orchestras; basic summaries and interesting new provisions are noted in Senza Sordino. Orchestras are encouraged to file bulletins as a basic source of information.

In the face of a threat to disband the orchestra, **Phoenix Symphony Orchestra** musicians agreed in June to extend current salary levels unchanged for another year, postponing negotiated increases until the following season.

In delivering its ultimatum to the musicians, the symphony board withdrew an earlier offer agreeing to develop a mutually acceptable artistic dismissals clause. Instead, the musicians will have an advisory committee to represent them on artistic dismissals, and they have the promise of the music director that no musicians will be put on probation during the 1985-1986 season.

Weekly wages for Phoenix musicians are \$450 for 39 weeks this season and next, \$500 for 41 weeks in 1986-1987.

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The index below provides a complete listing of articles published in Volume XXIII of Senza Sordino. In most cases the actual headline is used; where the actual headline is not particularly informative, a more explanatory heading has been substituted or a bracketed explanation added. Some items of minimal length or import have been omitted. Listings are in order of appearance in the newsletter. Settlement summaries appeared in every issue and are not noted in the index.

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