

## The Future of Music: Credo

JOHN CAGE

cloaked by ignorance and silence. Hence the use of noise in music has been largely unconscious and undiscussed. Perhaps this is why it has not been developed, like the more talked-of elements, such as harmony and melody. The use of noise in most music today is little beyond the primitive; in fact, it is behind most native music, where the banality of the thumps often heard in our concerts would not be tolerated.

Men like Varèse, in his *Hyperprism* or *Arcana* or Bartók, in his *Piano Concerto*, where he uses percussion noises canonically, render a service by opening a wide field for investigation—although they arrive at nothing conclusive. If we had scales of percussion-sounds, with each “key” determined by some underlying quality, such as drum-sound, cymbal-sound, and so on, we could produce music through the conscious use of the melodic steps that would then be at the disposal of the composer. Perhaps this is one of the things music is coming to, and a new chemistry of sound will be the result.

No figure has had a more profound influence on contemporary musical thought and practice than John Cage (1912–1992; see also chaps. 27 and 33). A student of Schoenberg and Cowell, Cage pioneered a host of techniques and practices that have become central to contemporary music making. In his early percussion ensembles, he included tin cans and other found objects alongside standard orchestral instruments. His *Imaginary Landscape No. 1* (1939) was among the very first compositions to employ turntables; and he was an early proponent of live electronics, composing pieces for radios, phonograph cartridges, computers, and other electronic devices. In 1940, Cage began composing for “prepared piano,” which called for the insertion of screws, bolts, cardboard, weather stripping, and other objects into the piano’s strings to highlight the instrument’s percussive character and to extend its sonorous possibilities. In the early 1950s, he pioneered the use of “chance” or “indeterminate” techniques in composition. Cage’s most famous piece *4’33”* (1952) calls for performers and audience members alike to experience four minutes and 33 seconds of “silence,” or non-intentional sound.

In the following piece, written in 1937, Cage joins Russolo and Varèse in imagining a musical future in which “noise” will be a crucial resource. “Whereas in the past,” Cage writes, “the point of disagreement has been between dissonance and consonance, it will be, in the immediate future, between noise and so-called musical sounds.” The future of music—from *musique concrète* and the classical avant-garde to free jazz, industrial music, HipHop and beyond—would certainly bear out Cage’s prediction.

### I BELIEVE THAT THE USE OF NOISE

Wherever we are, what we hear is mostly noise. When we ignore it, it disturbs us. When we listen to it, we find it fascinating. The sound of a truck at fifty miles per hour. Static between the stations. Rain. We

want to capture and control these sounds, to use them not as sound effects but as musical instruments. Every film studio has a library of "sound effects" recorded on film. With a film phonograph it is now possible to control the amplitude and frequency of any one of these sounds and to give to it rhythms within or beyond the reach of the imagination. Given four film phonographs, we can compose and perform a quartet for explosive motor, wind, heartbeat, and landslide.

#### TO MAKE MUSIC

If this word "music" is sacred and reserved for eighteenth- and nineteenth-century instruments, we can substitute a more meaningful term: organization of sound.

#### WILL CONTINUE AND INCREASE UNTIL WE REACH A MUSIC PRODUCED THROUGH THE AID OF ELECTRICAL INSTRUMENTS

Most inventors of electrical musical instruments have attempted to imitate eighteenth- and nineteenth-century instruments, just as early automobile designers copied the carriage. The Novachord and the Solovox are examples of this desire to imitate the past rather than construct the future. When Theremin provided an instrument with genuinely new possibilities, Thereminists did their utmost to make the instrument sound like some old instrument, giving it a sickeningly sweet vibrato, and performing upon it, with difficulty, masterpieces from the past. Although the instrument is capable of a wide variety of sound qualities, obtained by the turning of a dial, Thereminists act as censors, giving the public those sounds they think the public will like. We are shielded from new sound experiences.

The special function of electrical instruments will be to provide complete control of the overtone structure of tones (as opposed to noises) and to make these tones available in any frequency, amplitude, and duration.

#### WHICH WILL MAKE AVAILABLE FOR MUSICAL PURPOSES ANY AND ALL SOUNDS THAT CAN BE HEARD. PHOTOELECTRIC, FILM, AND MECHANICAL MEDIUMS FOR THE SYNTHETIC PRODUCTION OF MUSIC

It is now possible for composers to make music directly, without the assistance of intermediary performers. Any design repeated often enough on a sound track is audible. Two hundred and eighty circles per second on a sound track will produce one sound, whereas a portrait of Beethoven repeated fifty times per second on a sound track will have not only a different pitch but a different sound quality.

WILL BE EXPLORED.  
WHEREAS, IN THE PAST, THE POINT OF DISAGREEMENT HAS BEEN  
BETWEEN DISSONANCE AND CONSONANCE, IT WILL BE, IN THE IMMEDIATE  
FUTURE, BETWEEN NOISE AND SO-CALLED MUSICAL SOUNDS.

THE  
PRESENT METHODS OF WRITING MUSIC, PRINCIPALLY THOSE WHICH  
EMPLOY HARMONY AND ITS REFERENCE TO PARTICULAR STEPS IN THE  
FIELD OF SOUND, WILL BE INADEQUATE FOR THE COMPOSER, WHO WILL  
BE FACED WITH THE ENTIRE FIELD OF SOUND.

The composer (organizer of sound) will be faced not only with the entire field of sound but also with the entire field of time. The "frame" or fraction of a second, following established film technique, will probably be the basic unit in the measurement of time. No rhythm will be beyond the composer's reach.

#### NEW METHODS WILL BE DISCOVERED, BEARING A DEFINITE RELATION TO SCHOENBERG'S TWELVE- TONE SYSTEM

Schoenberg's method assigns to each material, in a group of equal materials, its function with respect to the group. (Harmony assigned to each material, in a group of unequal materials, its function with respect to the fundamental or most important material in the group.) Schoenberg's method is analogous to a society in which the emphasis is on the group and the integration of the individual in the group.

#### AND PRESENT METHODS OF WRITING PERCUSSION MUSIC

Percussion music is a contemporary transition from keyboard-influenced music to the all-sound music of the future. Any sound is acceptable to the composer of percussion music; he explores the academically forbidden "non-musical" field of sound insofar as is manually possible.

Methods of writing percussion music have as their goal the rhythmic structure of a composition. As soon as these methods are crystallized into one or several widely accepted methods, the means will exist for group improvisations of unwritten but culturally important music. This has already taken place in Oriental cultures and in hot jazz.

#### AND ANY OTHER METHODS WHICH ARE FREE FROM THE CONCEPT OF A FUNDAMENTAL TONE.

THE PRINCIPLE OF  
FORM WILL BE OUR ONLY CONSTANT CONNECTION WITH THE PAST.  
ALTHOUGH THE GREAT FORM OF THE FUTURE WILL NOT BE AS IT WAS  
IN THE PAST, AT ONE TIME THE FUGUE AND AT ANOTHER THE SONATA,  
IT WILL BE RELATED TO THESE AS THEY ARE TO EACH OTHER:

Before this  
happens, centers of experimental music must be established. In these centers,  
the new materials, oscillators, turntables, generators, means for amplifying small

sounds, film phonographs, etc., available for use. Composers at work using twentieth-century means for making music. Performances of results. Organization of sound for extra-musical purposes (theatre, dance, radio, film).

THROUGH THE PRINCIPLE OF ORGANIZATION OR MAN'S COMMON ABILITY TO THINK.

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## *The Music of the Environment*

R. MURRAY SCHAFER

Canadian composer and theorist R. Murray Schafer (1933– ) came to prominence in the early 1970s with a series of writings on environmental sound and noise pollution. In 1977, Schafer published *The Tuning of the World*, which presented his most thorough and cogent argument for what he termed “acoustic ecology.” Inspired by the Pythagorean (and, later, Cagean) idea that the cosmos itself is a musical composition, the book looked back on the history of modern literature, music, and audio theory (Russolo, Cage, Schaeffer, etc.) and offered prescriptions for a new kind of listening to the world “soundscape,” a term Schafer coined. Schafer also founded the World Soundscape Project, which drew attention to the sonic environment through location recordings and environmental advocacy. The “acoustic ecology” movement is still thriving today, notably represented by The World Forum for Acoustic Ecology and the work of environmental sound artists such as Hildegard Westerkamp, David Dunn, Douglas Quinn, and Chris Watson. The following piece is drawn from Schafer's *The Music of the Environment*, a 1973 pamphlet that presents, in distilled form, the argument Schafer elaborated in *The Tuning of the World*.

The soundscape of the world is changing. Modern man is beginning to inhabit a world with an acoustical environment radically different from any he has hitherto known. These new sounds, which differ in quality and intensity from those of the past, have already alerted researchers to the dangers of the imperialistic spread of more and larger sounds into every corner of man's life. In various parts of the world important research is being undertaken in many independent areas of sonic studies: acoustics, psychoacoustics, otology, audiology, noise abatement practices and procedures, communications and sound recording engineering (electroacoustics and electronic music), aural pattern perception and the structural analysis of speech and music. These researches are related; each is dealing with aspects of the world soundscape, the vast musical composition which is unfolding around us ceaselessly. In one way or another researchers engaged on these vari-