For Whom Does the Cricket Sing?

City children are familiar with the sights and sounds of mechanical contrivances such as vacuum cleaners; but unless they live close to a park, they may never experience the sounds of breezes rustling through the trees, the morning songs of birds or even the chirping of the crickets at twilight. Indeed, many a Providence youngster has never heard a cricket's song; and further, doesn't know whether a cricket is a sport or a bug.

For centuries, cricket sounds have enchanted people, soothed the distressed and inspired the poets. The most garrulous speaker will be reduced to silence when the evening cricket begins its song. There is something about the cricket repertoire, beyond its awesome rhythmicity, beyond its fidelity to but one tone, beyond even its tenacity that captivates the listener. And whether from the meadow or from the cottage hearth, it brings to the listener a sense of equanimity; truly, it is nature's congenial anodyne.

Surely the male cricket's song was not fashioned solely to confer a sense of peace upon humans at eventide. Nature is rarely so bounteous or considerate. Entomologists have lately devoted much research to the cricket, its biology, the sounds it generates and even its sex life; and as a result clarifying the dynamics of the cricket chirp.

The common cricket (*Gryllus assimilis*)—closely related to the katydid, the grasshopper and its migratory kin called the locust—has about 900 species, each with its characteristic cricket chirp. Crickets are nocturnal creatures; and their chirpings (generated only by males) are produced by the rubbing together of their dorsal wings, each wing endowed with a linear ridge containing a series of small rasp-like teeth. And thus, when the wings are alternately extended and retracted, the clicking (called stridulation) is generated by the rubbing together of these abrasive ridges. The chirpings, a sequence of sound impulses, are rapid (about 60 per second), the rate and tone distinctive to each species.

The commonest of the cricket songs is a sequence of clicks generated by the male to summon the female cricket, the sounds guiding the sexually receptive female to the male cricket's burrow. (Utter chaos would develop were it not for the fact that each species has its characteristic calling song and to which only females of the same species will respond.)

Once the couples are in the same vicinity, a second song is issued, called the courting song, a sort of prenuptial-agreement melody. And following the transfer of sperm, yet another sound is issued, a post-copulatory song. And finally, minutes later, a final group of clicks declaring fulfillment. The courtship scene is not a totally idyllic encounter since males will be obliged to fight other males to maintain their partnership; and thus this final song, called by biologists a song of triumph, is generated only by the victors.

The distinctive chirping patterns, with audible messages of critical communicative importance, are not learned; rather they are genetically determined and encoded in each cricket's genes. And thus, a cricket maturing in total isolation will still possess the neural instructions needed to create the sundry calls typical of his species.

The sounds of the crickets, biologists now tell us, are not rapturous expressions or songs of yearning, but rather the audible translation of some encoded genetic instruction to facilitate nature's fecund purposes.

The cricket is endowed with clusters of nerve cells scattered as discrete ganglia along its interior. There is no central registry of nerves—a brain—to exert ultimate control. And so, much of the cricket's actions and missions are automatic, a series of preprogrammed, indeed robotic, responses to a limited number of external stimuli. Biologists tell us that the mature cricket has inherited all of its actions, leaving nothing to chance or learning.

Robotic perhaps; yet in a world drowning in ambiguity and subtle nuance, it is refreshing to witness the directness and clarity of the cricket's audible messages. Other crickets, male or female, never have to speculate: "What did he mean by that series of chirps ? What was the deeper, existential, significance to his earnest message ?"

As emotion-laden humans rather than robotic insects, we humans are moved by things more complex than hereditary molecules. But sometimes, amidst the cacophony of our lives, we dream of and pine for the plainness, the precision, the transparency of the cricket songs.

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The author and his spouse/significant other have no financial interests to disclose.

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