The birds fly without a designated leader. It takes them about 50 milliseconds to reach consensus.

by Peter W. Marty in the May 23, 2018 issue



Murmuration of starlings. Getty Images.

One of the first bits of instruction in driver's education is to keep two eyes on the road. I've never forgotten that early wisdom and am alive in part because I've kept the most urgent rules of the road. But when driving for hours across vast expanses of Illinois farmland, which I do multiple times a month these years, I am, I confess, sometimes distracted. Sometimes I look up at the sky as much as I look down at the road.

Starlings are the reason. When a flock of starlings gathers up in formation, it's an avian air show that's hard to ignore. Thousands of these tiny birds flock together, swooping, dipping, and climbing in graceful uniformity. The sudden swelling or

contracting of a flock is one of the most fascinating phenomena known to nature. Birders refer to these amazing shape-shifting flight maneuvers as *murmuration*. To my eyes, these synchronized movements look like a magic carpet rippling and rolling through the sky, sometimes even obscuring the sunlight when the flock is large.

As I observe the undulating coordination of these small black birds in flight, the musical term *legato* comes to mind. A legato passage in a musical score has a curved line above the phrase to indicate that it is to be sung or played in flowing manner. The job of the musician is to smoothly connect each note with the next, avoiding any and all space between them. I never mastered legato tonguing in my horn-playing years. Separating the notes proved easier than connecting them, which is probably why an orchestra never called me up.

The starlings I've observed in the Illinois sky fly legato. Few other species in creation replicate their synchronicity. Like a gifted horn player floating through complex movements, starlings enjoy a coordinated fluency to their flight.

Thanks to high-speed photography, researchers today know why starlings interact so coherently and how they avoid midair collisions. Each starling pays attention only to six or seven surrounding birds. There is no designated leader. Any bird can initiate a change of direction. A consensus among hundreds or even thousands of birds can emerge within 50 milliseconds.

Christian congregations that know how to move with spontaneity, but which enjoy order within that spontaneity, are what I call legato congregations. They don't obsess over rules, yet they understand good process. They don't have a hierarchical plan for every new initiative, yet things get accomplished. They don't expect everybody to know everybody else, yet groups of people do purposeful things and build intimate community. Through the interplay of believers trying to find their way together, legato congregations build a coherent and meaningful life.

St. Luke describes an early example of Christian community that enjoyed such synchronicity. According to Acts 4, these believers experienced a palpable unity with one another ("those who believed were of one heart and soul"). They practiced sharing their possessions ("everything they owned was held in common"). Every individual in the community had the basic necessities of life covered ("there was not a needy person among them"). The power of their resurrection testimony inspired

them with extraordinary grace ("great grace was upon them all").

Legato is more than a musical term. It can also define a flock of birds flying overhead, or a group of believers working together down below.

A version of this article appears in the print edition under the title "Changing directions together."