

# FINAL SAY

## GLOBAL SWARMING

The human tendency to congregate has good and bad aspects



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**A**ccording to Merriam-Webster's online dictionary, the Latin etymology of the word "congestion" is "congestus, past participle of congerere—to bring together." In other words, traffic congestion is the result of people "coming together" on the highway.

Congregating is something we humans do very well; it is a natural behavior. Without time pressure, traffic congestion might be enjoyable to us. It is the fact that being late to work or to an appointment has negative consequences that makes traffic congestion so irritating. Morning traffic volumes in

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urban centers tend to be more "peaked" as people strive to get to work on time, and afternoon traffic tends to be more spread out because of people's tendency to leave work and travel home at their own pace. If you are late to work you are likely to travel as fast as the traffic ahead of you will allow, thus the term "rush hour."

If you are not in a rush, you may even feel a little relieved when traffic slows down to a reasonable speed. Imagine a rainy day and a slick urban freeway: When traffic slows from 70 mph to 35 mph, you feel delayed but a bit safer.

In the Rocky Mountains on I-70, where they have implemented a quick-clearance program for incidents, the Colorado DOT and State Patrol also have implemented a pilot vehicle program nicknamed "Icy Falcon." After vehicles are cleared and the road reopens, State Patrol and CDOT vehicles ride side by side at 35-45 mph through narrow and winding mountain passes to "pace" the getaway traffic to reduce the additional accidents that are almost guaranteed to occur as people stuck behind the closure race to make up lost time. Once traffic starts to flow at a safe and steady pace, the pilot vehicles exit.

In recent years, freeway operations professionals have begun to focus more on "travel-time reliability" as a more meaningful measure of traffic management than the old concept of level of service, or the absence of congestion. The concept is that people generally accept recurring congestion as a fact of life. They will settle for simply knowing how long a trip is likely to take so they can plan effectively. This is the principle of uncertainty reduction. Knowing about how long a trip should take reduces the time pressure and frustration associated with being delayed unexpectedly.

Intelligent transportation systems (ITS) can truly be used to moderate and manage traffic flow to try to achieve optimal performance. Incident management with ITS includes quick detection and reaction to blocked lanes that cause severe congestion and unreliable travel times. Service patrols have proven to be highly effective in quickly removing

minor obstacles and reducing secondary accidents.

There is a popular saying that people only use 10% of their brainpower, and the same is true for use of ITS. Most freeway management systems in the U.S. are grossly underutilized by their owner-agencies. Some of our larger multi-freeway regional ITS that touch the lives of more than a million drivers each day are operated by a minimal number of underpaid people, who operate within constrained policies designed to minimize risk of mistakes rather than exploit the power of the systems. This inadequacy explains the trend toward posting automatically generated travel times on variable message signs and rarely using the signs for specific information to avoid congestion or delay.

ITS has become more of a congestion-reporting technology than a congestion-reduction technology. There is more value placed on gathering real-time data and providing it to users than trying to make the conditions the data represent better. It seems that the idea of "battling congestion" as if it was something evil is giving way to a gentler philosophy of living with congestion and selling avoidance capability for the highest price the market will bear. Increasingly popular are express lanes that provide a better ride for those willing to pay a toll.

Our natural tendency to congregate stresses the economy, environment and infrastructure.

Congestion will not rise to the level of global warming in the national dialogue. Like a common cold, traffic congestion may eventually cure itself if inflated gas prices bankrupt enough auto owners. Or, like a common cold, untreated congestion could progress to pneumonia. If history repeats itself, our natural tendency to congest our surroundings will overcome all resistance and worsen. Maybe we should call congestion "global swarming."

**TME**

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