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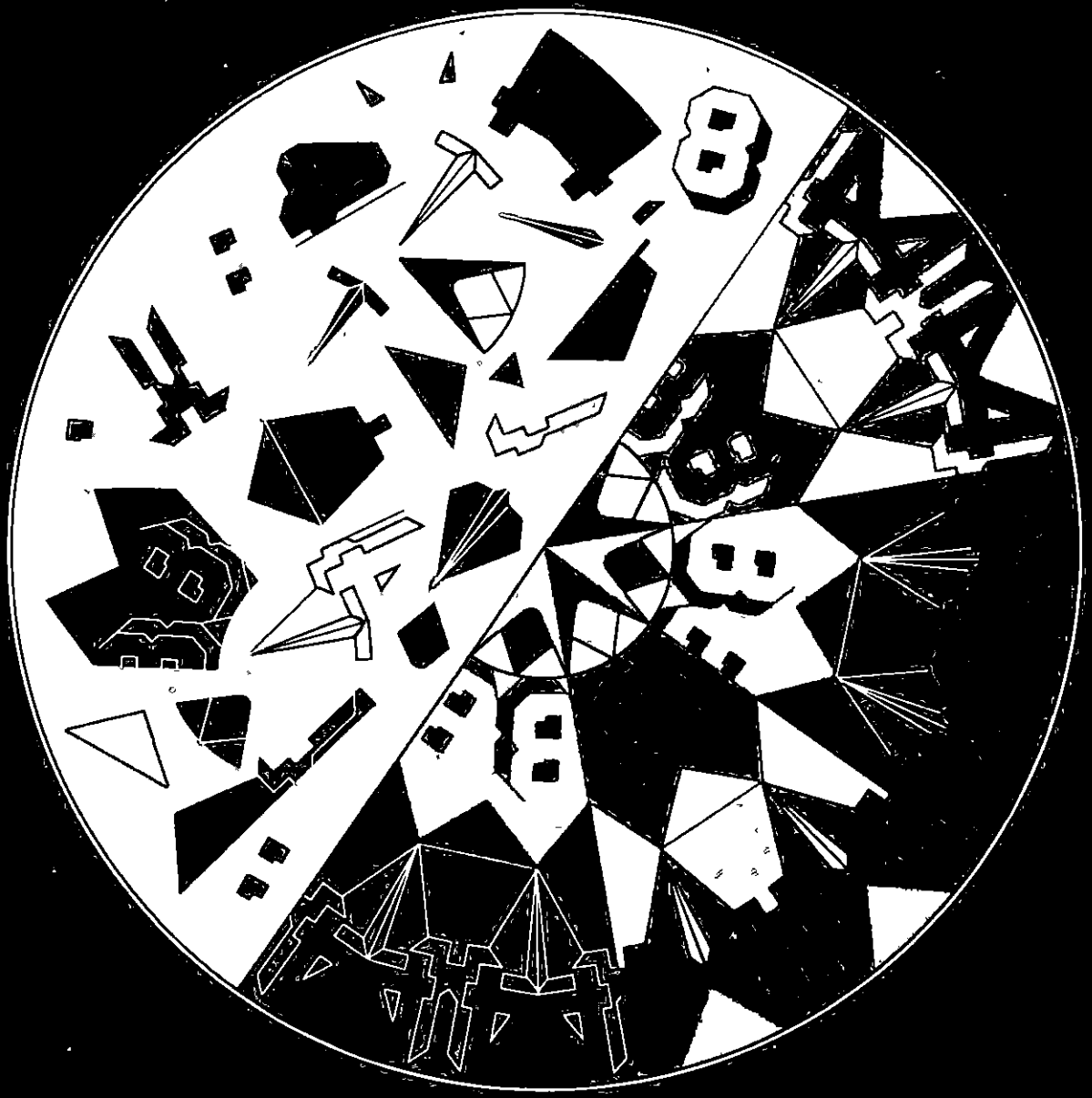

Kaleidoscopes and economic models:

when they work, they translate reality into recognizable images

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In This Issue

How do we learn the truth about an economic variable, such as the price of hogs? One way is to study its history carefully and discover exactly what sort of behavior it has exhibited Frequently, one finds patterns in its past that prove useful in predicting its future. Another way is to study the historical interrelationships of the variable with a number of others and to rely on economic theory to suggest what sort of relationships might be meaningful Then if you know (or assume you know) the values of some variables in the interrelated system, you can explain and predict the values of others These two contrasting and fundamentally different ways of applying economics are illustrated in this issue

The article by Bessler examines variables one at a time Bessler used advanced statistical procedures developed during the past two decades, such as adaptive expectations, exponential weighted forecasts, and autoregressive integrated moving average processes However, his general approach is far older The Babylonians used it successfully 3,000 years ago to describe the paths of the wandering planets and to forecast eclipses of the sun Bessler applied the method to 25 time series of agricultural prices and quantities He found it useful for describing and predicting behavior in about half the cases This degree of success explains why the method has been used all these years However, the fact that the method failed in about half the cases explains one reason why science has sought other methods

The article by Salathe, Price, and Gadson reviews an econometric model ERS used to describe the interrelationships of 360 endogenous variables and to forecast their values by assuming values for 265 exogenous variables This model, too, builds on the work of many people over the past three decades Both methods have descriptive uses, and both give very good forecasts of some variables But, the ERS model grows out of a more recent tradition and has some fundamentally different properties It reflects the scientific revolution which had roots in the thinking of the ancient Greeks, but which bore fruit mostly during the past three or four centuries It seeks to go beyond describing appearances and seeks to explain the mechanism behind them It depends for explanation on empirically significant descriptions of theoretically valid relationships among variables

While both methods describe and forecast, the latter is capable of doing more With the aid of economic theory, it can explain why a variable takes on the values it does And it can go beyond history to estimate what might have happened had historical events been different Or, we can use the same feature to predict alternative futures In their article, Salathe and others illustrate this property by assessing the probable consequences for U S agriculture of both an increase in the export market for corn and a decrease in U S imports of beef

Clark Edwards

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