

Growing up, I was always taught that we will be judged by how we treat others. If we are collectively judged by how we have treated immigrants—those who would appear today to be “other” but will in a generation be “us”—we are not in very good shape.

For Critical Thinking

QUESTIONS ABOUT PURPOSE

1. Why does Cole begin his essay with a discussion of the “Knowing Nothing” political movement?
2. Why does he describe his categories as *myths* rather than errors or mistakes?

QUESTIONS ABOUT AUDIENCE

1. How does Cole use his own family history to establish a connection with his readers?
2. How does he address his readers who may favor the anti-immigrant position?

QUESTIONS ABOUT STRATEGIES

1. What kind of evidence does Cole use to dispute each of the five myths?
2. How does he use his last paragraph to bring his analysis to an appropriate conclusion?

For Writing and Research

1. **Analyze** the evidence Cole uses to assert the long-term economic advantages of immigration.
2. **Practice** by classifying several *myths* about a specific group of immigrants in your community.
3. **Argue** that there is some justification for the assertion that immigrants resist—or at least have great difficulty—assimilating into American culture.
4. **Synthesize:** Research the immigration history of your family. Then use this information to help explain why certain generations of your family seemed to support or refute one of Cole’s myths.

James H. Austin: Four Kinds of Chance

James H. Austin was born in 1925 in Cleveland, Ohio, and educated at Brown University and Harvard University Medical School. After an internship at Boston City Hospital and a residency at the Neurological Institute of New York, Austin established a private practice in neurology, first in Portland, Oregon, and then in Denver, Colorado. He currently serves as professor and head of the Department of Neurology at the University of Colorado Medical School. His major publication, *Chase, Chance, and Creativity: The Lucky Art of Novelty* (1978), addresses the issue of how “chance and creativity interact in biomedical research.” His recent books include *Zen and the Brain: Toward an Understanding of Meditation and Consciousness* (1999), *Zen-Brain Reflections: Reviewing Recent Developments in Meditation and States of Consciousness* (2006), and *Meditating Selflessly: Practical Neural Zen* (2011). In this essay, published originally in *Saturday Review* (November 2, 1972), Austin distinguishes four kinds of chance by the way humans react to their environment.

WHAT IS CHANCE? Dictionaries define it as something fortuitous that happens unpredictably without discernible human intention. Chance is unintentional and capricious, but we needn’t conclude that chance is immune from human intervention. Indeed, chance plays several distinct roles when humans react creatively with one another and with their environment. We can readily distinguish four varieties of chance if we consider that they each involve a different kind of motor activity and a special kind of sensory receptivity. The varieties of

chance also involve distinctive personality traits and differ in the way one particular individual influences them.

Chance I is the pure blind luck that comes with no effort on your part. If, for example, you are sitting at a bridge table of four, it's "in the cards" for you to receive a hand of all 13 spades, but it will come up only once in every 6.3 trillion deals. You will ultimately draw this lucky hand—with no intervention on your part—but it does involve a longer wait than most of us have time for.

Chance II evokes the kind of luck Charles Kettering had in mind when he said: "Keep on going and the chances are you will stumble on something, perhaps when you are least expecting it. I have never heard of anyone stumbling on something sitting down."

The term serendipity describes the facility for encountering unexpected good luck, as the result of accident, general exploratory behavior, or sagacity.

In the sense referred to here, Chance II is not passive, but springs from an energetic, generalized motor activity. A certain basal level of action "stirs up the pot," brings in random ideas that will collide and stick together in fresh combinations, lets chance operate. When someone, *anyone*, does swing into motion and keeps on going, he will increase the number of collisions between events. When a few events are linked together, they can then be exploited to have a fortuitous outcome, but many others, of course, cannot. Kettering was right. Press on. Something will turn up. We may term this the Kettering Principle.

In the two previous examples, a unique role of the individual person was either lacking or minimal. Accordingly, as we move on to Chance III, we see blind luck, but in camouflage.

Chance presents the clue, the opportunity exists, but it would be missed except by that one person uniquely equipped to observe it, visualize it conceptually, and fully grasp its significance. Chance III involves a special receptivity and discernment unique to the recipient. Louis Pasteur characterized it for all time when he said: "Chance favors only the prepared mind."

Pasteur himself had it in full measure. But the classic example of his principle occurred in 1928, when Alexander Fleming's mind instantly fused at least five elements into a conceptually unified nexus. His mental sequences went something like this: (1) I see that a mold has fallen by accident into my culture dish; (2) the staphylococcal colonies residing near it failed to grow; (3) the mold must have secreted something that killed the bacteria; (4) I recall a similar experience once before; (5) if I could separate this new "something" from the mold, it could be used to kill staphylococci that cause human infections.

Actually, Fleming's mind was exceptionally well prepared for the penicillin mold. Six years earlier, while he was suffering from a cold, his own nasal drippings had found their way into a culture dish, for reasons not made entirely clear. He noted that nearby bacteria were killed and astutely followed up the lead. His observations led him to discover a bactericidal enzyme present in nasal mucus and tears, called lysozyme. Lysozyme proved too weak to be of medical use, but imagine how receptive Fleming's mind was to the penicillin mold when it later happened on the scene!

One word evokes the quality of the operations involved in the first three kinds of chance. It is *serendipity*. The term describes the facility for encountering unexpected good luck, as the result of accident (Chance I), general exploratory behavior (Chance II), or sagacity (Chance III). The word itself was coined by the Englishman-of-letters Horace Walpole, in 1754. He used it with reference to the legendary tales of the Three Princes of Serendip (Ceylon), who quite unexpectedly encountered many instances of good fortune on their travels. In today's parlance, we have usually watered down *serendipity* to mean the good luck that comes solely by

accident. We think of it as a result, not an ability. We have tended to lose sight of the element of sagacity, by which term Walpole wished to emphasize that some distinctive personal receptivity is involved.

There remains a fourth element in good luck, an unintentional but subtle personal prompting of it. The English Prime Minister Benjamin Disraeli summed up the principle underlying Chance IV when he noted that “we make our fortunes and we call them fate.” Disraeli, a politician of considerable practical experience, appreciated that we each shape our own destiny, at least to some degree. One might restate the principle as follows: *Chance favors the individualized action.*

In Chance IV, the kind of luck is peculiar to one person, and like a personal hobby, it takes on a distinctive individual flavor. This form of chance is one-man-made, and it is as personal as a signature. . . . Chance IV has an elusive, almost miragelike, quality. Like a mirage, it is difficult to get a firm grip on, for it tends to recede as we pursue it and advance as we step back. But we still accept a mirage when we see it, because we vaguely understand the basis for the phenomenon. A strongly heated layer of air, less dense than usual, lies next to the earth, and it bends the light rays as they pass through. The resulting image may be magnified as if by a telescopic lens in the atmosphere, and real objects, ordinarily hidden far out of sight over the horizon, are brought forward and revealed to the eye. What happens in a mirage then, and in this form of chance, not only appears farfetched but indeed is farfetched.

About a century ago, a striking example of Chance IV took place in the Spanish cave of Altamira.* There, one day in 1879, Don Marcelino de Sautuola was engaged in his hobby of archaeology, searching Altamira for bones and stones. With him was his daughter, Maria, who had asked him if she could come along to the cave that day. The indulgent father had said she could. Naturally enough, he first looked where he had always found heavy objects before, on the *floor* of the cave.

* The cave had first been discovered some years before by an enterprising hunting dog in search of game. Curiously, in 1932, the French cave of Lascaux was discovered by still another dog.

But Maria, unhampered by any such preconceptions, looked not only at the floor but also all around the cave with the open-eyed wonder of a child! She looked up, exclaimed, and then he looked up, to see incredible works of art on the cave ceiling! The magnificent colored bison and other animals they saw at Altamira, painted more than 15,000 years ago, might lead one to call it “the Sistine Chapel of Prehistory.” Passionately pursuing his interest in archaeology, de Sautuola, to his surprise, discovered man’s first paintings. In quest of science, he happened upon Art.

Yes, a dog did “discover” the cave, and the initial receptivity was his daughter’s, but the pivotal reason for the cave paintings’ discovery hinged on a long sequence of prior events originating in de Sautuola himself. For when we dig into the background of this amateur excavator, we find he was an exceptional person. Few Spaniards were out probing into caves 100 years ago. The fact that he—not someone else—decided to dig that day in the cave of Altamira was the culmination of his passionate interest in his hobby. Here was a rare man whose avocation had been to educate himself from scratch, as it were, in the science of archaeology and cave exploration. This was no simple passive recognizer of blind luck when it came his way, but a man whose unique interests served as an active creative thrust—someone whose own actions and personality would focus the events that led circuitously but inexorably to the discovery of man’s first paintings.

Then, too, there is a more subtle matter. How do you give full weight to the personal interests that imbue your child with your own curiosity, that inspire her to ask to join you in your own musty hobby, and that then lead you to agree to her request at the critical moment? For many reasons, at Altamira, more than the special receptivity of Chance III was required—this was a different domain, that of the personality and its actions.

A century ago no one had the remotest idea our caveman ancestors were highly creative artists. Weren’t their talents rather minor and limited to crude flint chippings? But the paintings at Altamira, like a mirage, would quickly magnify

this diminutive view, bring up into full focus a distant, hidden era of man's prehistory, reveal sentient minds and well-developed aesthetic sensibilities to which men of any age might aspire. And like a mirage, the events at Altamira grew out of de Sautuola's heated personal quest and out of the invisible forces of chance we know exist yet cannot touch. Accordingly, one may introduce the term *altamirage* to identify the quality underlying Chance IV. Let us define it as the facility for encountering unexpected good luck as the result of highly individualized action. *Altamirage* goes well beyond the boundaries of serendipity in its emphasis on the role of personal action in chance.

Chance IV is favored by distinctive, if not eccentric, hobbies, personal life-styles, and modes of behavior peculiar to one individual, usually invested with some passion. The farther apart these personal activities are from the area under investigation, the more novel and unexpected will be the creative product of the encounter.

For Critical Thinking

QUESTIONS ABOUT PURPOSE

1. What elements of human behavior and attitude does Austin demonstrate by dividing chance into four varieties?
2. What relationship does Austin discover between the words *luck*, *serendipity*, *sagacity*, and *altamirage*?

QUESTIONS ABOUT AUDIENCE

1. What assumptions does Austin make about his readers when he offers them *the best example* rather than several examples to illustrate each category?
2. How does Austin's attitude toward his audience change during the essay? For example, why does he speak directly to his readers when he explains Chance I but address them more formally in his discussion of other categories?

QUESTIONS ABOUT STRATEGIES

1. How does Austin arrange his four categories? Why doesn't he give equal treatment to each category?
2. How does Austin use transitions and summaries to clarify the differences between the major categories? In particular, see paragraphs 6 and 9.

For Writing and Research

1. **Analyze:** the "best" examples Austin uses to illustrate his four kinds of chance.
2. **Practice:** by classifying types of bad luck.
3. **Argue:** in favor of baseball owner Branch Rickey's assertion that "luck is the residue of design."
4. **Synthesize:** the research on those who make a career of gambling—for example, professional poker players. Then use this evidence to argue that skill does or does not contribute to this success.