Does Astrology Need to Be True? Part 2: The Answer Is No

New evidence shows that astrologers are seeing faces in clouds. And a famous legal case is demystified.

Geoffrey Dean

In Part 1 we saw that astrologers believe in the real thing (serious astrology) because it works, i.e., is helpful. But is it true? More to the point, does it need to be true? Four independent surveys of published predictions found no evidence that astrologers can predict better than guessing. Seven studies of chart interpretations found no evidence that subjects can discriminate between right and wrong charts, suggesting that the perceived validity of astrology is an illusion. However, the picture is blurred, because chart interpretations tend to be wordy and rambling, making judgment difficult. So what happens when especially concise interpretations are used to make judgment easy? I decided to find out.

MY EXPERIMENT consisted of having each of 22 subjects rate an extremely concise interpretation of his/her astrological chart. The subjects (5 male, 17 female, mean age 31) were recruited through a local occult bookstore and ads in an occult magazine and were previously unknown to me. Each interpretation was based solely on interplanetary aspects (specified angular separations), because these generally have clear

Geoffrey Dean, a former CSIRO research scientist and currently a technical editor with Australia's major publisher of technical documentation, has been actively investigating astrological claims for the past 15 years.

meanings, can be weighted in strength according to exactness, and are considered by many astrologers to be the most important factors in the chart. For example, the eminent U.S. astrologer Rob Hand (1981) says, "They usually speak the loudest and yield the most reliable results." The effect of the other chart factors is discussed later.

Each interpretation consisted of a list of the closest aspects (typically 10 to 12 per chart), their exactness (range 0 to 5 degrees), their individual meanings expressed as adjectives or short statements (average 22 items per chart), and their opposite meanings (average 18 items per chart). For example, the meanings for Mars conjunct Uranus were as follows:

Meaning: impatient, mind of own, disruptive	(3 items)
Opposite: patient, easily led, not disruptive	(3 items)

The strength of these indications would then be strong, average, or weak, depending upon the exactness. The strength was not quantified; instead, the subject made his/her own estimate of the exactness, with verbal guidance from me. Obviously a subject who could be both *x* and *not x* would agree with anything the chart said about *x,* thus inflating the apparent accuracy, so opposite meanings were included to avoid this problem. The meanings and opposites were labeled so that the subject knew which was which.

The subjects were led to believe that the chart interpretations were authentic. In fact, only half the subjects received interpretations based on their actual charts. The rest received interpretations based on what I call "reversed charts." A reversed chart is one made to be as opposite to the actual chart as possible but with the same sun-sign to avoid suspicion. Thus, if the actual chart contained sun square Mars (= impetuous), the planets in the reversed chart would be juggled to give sun trine Saturn (= cautious). In this way extroverted indications were substituted for introverted, stable for unstable, tough for tender, ability for inability, and so on. The use of reversed charts is preferable to using actual charts with reversed interpretations because it allows the reader (in this case, me) to proceed normally without the need for pretense —an important consideration in a face-to-face situation. Some charts are too ambiguous to be adequately reversed; such cases were not included among the 22 subjects.

The subjects came separately for their consultations. I gave each subject a birth chart and written interpretation, explained what the chart symbols meant, and stressed the need to test the chart carefully before its indications could be accepted (this justified the next bit). The subject then rated on a 3-point scale (correct, uncertain, incorrect) each item in the interpretation, rating it as correct only if both meaning and strength were correct. This made the test as severe as possible. When finished, the subject carefully reviewed the ratings as a whole to resolve (1) any uncertainties, and (2) any conflict between one part of the interpretation and another (this accommodated the dictum that astrological factors cannot be judged in isolation). Most subjects

changed nothing. Each session was unhurried and occupied one to two hours. All subjects found the rating procedure to be simple and straightforward.

In this test the meanings were made as clear and concise as possible, and half the charts were made as wrong as possible. According to astrology the wrong charts should have stood out a mile. But the results (Table 1) show they were rated just as highly as right charts. In fact the results were so consistent and clear-cut that plans for further tests (which required a full day's work for each subject) were abandoned. However, I did perform a couple of similar tests in which two female subjects (known to each other but not to me) attended together and rated supposedly authentic interpretations that had in fact been switched. The results were the same: The subjects agreed with what seemed to be theirs (but were actually not theirs), and disagreed with what seemed to be not theirs (but were actually theirs). Moreover each subject agreed with the other's assessment.

However, before we can believe these results, we have to be sure that they cannot be explained by other chart factors, such as signs and houses, or by subjects preferring desirable descriptions (generous, serious) to undesirable ones (extravagant, grim). This is shown to be the case in Table 2. We also have to be sure that my personal presence did not bias the subjects' ratings. Fortunately this can be checked against an earlier published study of mine involving similar ratings done by mail and therefore free from such bias (Dean and Mather 1977, p. 39). In this study the average hit rate indicated by 44 subjects was 95 percent, or almost exactly the same as in the present study. This shows that any bias is not appreciable. So what do these results tell us?

TABLE 1

Can Subjects Tell Authentic Charts from Reversed Charts?

Charts	Number of items rated by 11 subjects	Number of hits*	Hits %	Range %
Authentic	261 meanings	250	96	90-100
	213 opposites	25	12	0-37
Reversed	214 meanings	207	97	90-100
	186 opposites	29	16	6-22

*Item was a hit if correct and a miss if uncertain or incorrect.

Answer: No. Subjects rated reversed charts (whose astrological indications could not have been more wrong) just as highly as authentic charts.

Reversed Charts and Cognitive Dissonance

The subjects clearly believed that their charts provided true descriptions of themselves even when, according to astrology, the descriptions could not have been more wrong. This finding is consistent with the results of previous

studies (see Table 1 in Part 1) and of the German psychologist and astrologer Peter Niehenke (1984). Niehenke gave 3,150 German subjects a 500-item questionnaire designed to test astrological claims, including aspect interpretations. The results were completely negative; for example, subjects with as many as four Saturn aspects (which are supposed to indicate heavy responsibility and depression) felt no more depressed than those with no Saturn aspects.

Similar results were obtained by Neher (1980) in small-scale studies of numerology, palmistry, Tarot, and the I-Ching, by Dlhopolsky (1983) in a small-scale study of numerology, and by Blackmore (1983) in tests of Tarot interpretations involving 29 subjects. In every study the subjects were unable to pick the right interpretation at better than chance level. Similarly, Hyman (1977, p. 27) found that palmistry was just as successful when the interpretation was the opposite of what the hand indicated. I myself have given astrologers a chart that was supposedly mine, but was actually that of somebody quite different from me, and their interpretations always fitted me perfectly.

But why should subjects see the birth chart (whether right or wrong) as being valid? Possible explanations are surprisingly numerous (Table 3). Some, like the Barnum effect (Dickson and Kelly 1985), where people accept vague statements as being specific for them when in fact they apply to everybody, are well known. Others, like selective memory (Russell and Jones 1980), the "Dr. Fox effect" (Naftulin et al. 1973), and hindsight bias (Marks and Kammann 1980), are less well known but can be remarkably potent. So when Rosenblum (1983, pp. 3-4), in the quotation cited in Part 1, saw pointedly specific meaning in what the astrologer said, we cannot conclude that there is necessarily something in astrology.

Most studies of actual interpretations have concentrated on generality (Barnum effect) and social desirability. For example Tyson (1984) found that the acceptance of chart interpretations prepared by a professional astrologer increased with their desirability; and Blackmore (1983) found that the acceptance of her Tarot interpretations increased with their generality and desirability, the correlation being about 0.3 in each case.

The mix of factors will of course vary with the astrologer. Thus Grange (1982) tested a professional astrologer whose interpretations happened to be clear and specific ("You have a good imagination"). They were judged by 54 subjects to be less accurate than Barnum and graphological statements (which were equally general), which in turn were judged to be less accurate than statements based on responses to the Eysenck Personality Questionnaire (which were necessarily specific and accurate). This shows that specific chart interpretations can be so wrong that the astrologer would be hard pressed to survive without support from the factors in Table 3.

In the present study, factors like generality and desirability do not apply. Hence the most likely explanation seems to be cognitive dissonance, or the need to justify our decisions and thus reduce any conflict (dissonance) between our thoughts and actions. The subjects were interested in astrology and prob-

ably believed in it, so they were motivated to avoid the pain of having their beliefs shattered. The interpretation test therefore became a search (albeit unconscious) for personal attributes to confirm their belief. Given the variability of human nature (we have all been everything at some time or another) the search could hardly fail.

TABLE 2
Some Individual Ratings of Aspect Interpretations

AUTHENTIC CHART

Subject agreed with this (= meaning of aspect actually present)	And disagreed with this (= meaning opposite to aspect actually present)	Aspect actually present*
Self-willed, pig-headed, tense	Calm, diplomatic, not tense	Su-Ur
Imprudent, extreme, restless	Restrained, not restless	Mo-Ju
Erratic, lacks confidence	Calm, confident	Mo-Ur
Confused, overly imaginative	Methodical, not imaginative	Me-Ne
Active, overscattered	Patient, persistent	Ma-Ju
Irritable, disruptive	Even, not disruptive	Ma-Ur
Forceful, overdoes things	Moderate, not forceful	Ma-Pl

*All are hard aspects and all are exact within 3 degrees. So according to astrology their effect should be strong.

REVERSED CHART

Subject agreed with this (= meaning of aspect supposedly present)	And disagreed with this (= meaning of aspect actually present)	Aspect actually present*
Well-directed, organized	Impetuous, overactive, scattered	Su-Ma
Considerate, self-effacing	Forceful, self-centered	Su-Pl
Mind separate from feelings	Mind linked to feelings	Mo-Me
Emotionally reserved, calm	Outgoing, moody	Mo-Ju
Restless mind, innovative	Methodical mind, cautious	Me-Sa
Steady mind, overcautious	Restless mind, scattered	Me-Ur
Cautious, well-directed	Impulsive, scattered	Ma-Ju

*All have no contrary indications by sign, house, or aspect elsewhere in the chart. All except Mo-Me are hard aspects and most are exact within 2 degrees. So according to astrology their effect should be extremely strong.

The interpretations are verbatim but have been condensed where necessary to fit the space. The upper examples show that *unpleasant* interpretations can be accepted, suggesting that belief in astrology can be stronger than social desirability. The lower examples show that unambiguously *wrong* interpretations can be accepted, suggesting that the belief itself can be stronger than any astrological effect.

This conclusion is supported by the results of Kallai (1985), who asked 101 male and female subjects aged 15 to 16 to judge the agreement between four supposedly astrological predictions and entries in a diary. Each prediction consisted of four statements, such as "You'll become more popular this week." The diary contained typically seven entries per prediction and was written so that one statement was confirmed ("I appeared on TV"), one was half-confirmed, one was disproved, and one was not referred to. The predictions were rated successful more often by believers in astrology than by nonbelievers, showing that what you believe affects what you see. Further striking but nonastrological examples are given by Marks and Kammann (1980).

If what you believe affects what you see, what happened before you believed what you believe? In other words, how do people come to believe in astrology?

How Does Belief in Astrology Arise?

For most people belief in astrology probably arises the same way: We hear or read what our sun-sign is supposed to mean, compare it with what we see in ourselves, and proceed from there. Let us look at what happens by summarizing in a single adjective the meaning of each sun-sign from Aries through Pisces, as follows—*assertive, possessive, changeable, sensitive, creative, critical, harmonious, secretive, adventurous, cautious, detached, intuitive.* Because we are interested only in our own sign, we fail to notice what astrologers aren't telling us, namely, that these traits are universal. Everybody behaves in each of these ways at various times; so, no matter what your sign is, it will agree with a trait you already possess. Lo! Astrology works—and you have started on the road to belief.

But there is more down this road than the universal validity of sun signs. Suppose astrology says that a person is extroverted, and we test this by asking the person questions. Since introverts occasionally do extroverted things, and vice versa, asking questions about instances of extroverted behavior ("Do you go to parties?") will necessarily produce extroverted answers that confirm astrology. Conversely, introverted questions ("Do you read books?") will necessarily produce introverted answers that disconfirm astrology. In other words the slant of the question can determine the outcome regardless of reality. So when testing astrology, what kind of questions do we tend to choose?

Glick and Snyder (1986) made an ingenious study to find out. They asked 12 believers and 14 skeptics to each test the validity of a brief chart interpretation (which indicated that the subject was highly extroverted) by asking the subject 12 questions chosen from a list of 11 confirmatory (extroverted) questions, 10 disconfirmatory (introverted) questions, and 5 neutral questions. The subject was in fact a confederate who gave predetermined answers matching the slant of the questions. Both believers and skeptics chose on the average just over 7 confirmatory questions, 3 disconfirmatory questions, and

TABLE 3

Twenty Ways to Convince Clients that Astrology Works

Principle	Factor	How it works.
Cues	Cold reading.	Let body language be your guide.
Disregard for reality	Illusory validity.	Sound argument yes, sound data no.
	Procrustean effect.	Force your client to fit the chart.
	Regression effects.	Winter doesn't last forever.
	Selective memory.	Remember only the hits.
Faith	Predisposition.	Preach to the converted.
	Placebo effect.	It does us good if we think it does.
Generality	Barnum effect.	Statement has something for everybody.
	Situation dependence.	Everybody has something for statement.
Gratification	Client misfortune.	The power of positive thinking.
	Rapport.	Closeness is its own reward.
Invention	Non-falsifiability.	Safety in numbers.
Packaging	Dr. Fox effect.	Blind them with science and humor.
	Psychosocial effects.	The importance of first impressions.
	Social desirability.	I'm firm, you're obstinate, he's —.
Self-fulfilling prophecies	Hindsight bias.	Once seen, the fit seems inevitable.
	Projection effects.	Find meaning where none exists.
	Self-attribution.	Role-play your birth chart.
Self-justification	Charging a fee.	The best things in life are not free.
	Cognitive dissonance.	Reduce conflict—see what you believe.

This table shows that there are many nonastrological reasons why clients should be satisfied by an astrological consultation, none of which require that astrology be true. But if clients are going to be satisfied with the product offered, then astrologers can hardly fail to believe in astrology. In this way a vicious circle of reinforcement is established whereby astrologers and their clients become more and more persuaded that astrology works. An astrologer typically spends years learning to read charts and thus has ample chance to respond to such reinforcement.

less than 2 neutral questions. In other words, *regardless of their stake in the outcome,* they tended to test the interpretation with questions that were bound to confirm it. This is consistent with the results of research into hypothesis-testing strategies in general (Nisbett and Ross 1980). But the surprises didn't end there.

For skeptics, the greater the number of confirmatory questions they asked (which of course increased the amount of confirmatory information they received), the more accurate they rated the chart interpretation, the correlation being an impressive 0.75—in fact two skeptics gave higher ratings than any believer. But for believers there was no correlation. All of them rated the interpretation as accurate or mostly accurate, regardless of the number of

confirmatory questions asked, showing that their rating bore little or no relation to the information received.

Russell and Jones (1980) observed similar results for belief in ESP among 50 college students divided equally into believers and skeptics. For skeptics, about 90 percent accurately remembered an article on ESP regardless of whether it was favorable or unfavorable. For believers, 100 percent accurately remembered the favorable article but less than 40 percent accurately remembered the unfavorable article; 16 percent actually remembered it as favorable. The believers who read the unfavorable article were far more upset than the skeptics who read the favorable article.

So it seems that belief in astrology arises because (1) astrological interpretations tend to be universally valid, and (2) we tend to test an interpretation with strategies that are bound to confirm it. If one is basically a skeptic, one's belief will be modified by subsequent evidence. If one is basically a believer, one's belief will persist because apparently positive evidence (as in Table 3) will be remembered, whereas negative evidence (like this article) will be ignored. On this basis, regardless of the evidence, astrology is not going to go away.

Astrology and Human Inference

It would be wrong to conclude that the apparent validity of an astrological consultation (Table 3) is due to nothing more than simple-minded gullibility. As Hyman (1981) and Connor (1984) point out, words and sentences do not exist like chunks of rock but have to be interpreted before they mean anything. Thus the message received by the client is determined by his previous programming, that is, by the experiences and expectations he draws on to give it meaning. Even with a transcript you can never experience the interpretation the way the client did—what seems facile to you ("You have problems with money") may be deeply meaningful to the client. So no description given by me can possibly recreate what a chart interpretation feels like; for this you need to visit a good astrologer.

The point I am making is that, far from exemplifying gullibility, the factors in Table 3 mostly reflect the very human ways in which we cope with the world. In other words, fundamental to our understanding of astrology (and anything else for that matter) is the problem of human inference, namely, the ability of human beings to correctly judge what is going on. Because our everyday judgment is so successful most of the time, it never occurs to us that it might be grossly inadequate in certain situations, just as it never occurs to astrologers to test wrong birth charts. Thus we see that the interpretation fits and conclude that astrology works. What could be simpler and more convincing? But, as we have seen, it is not nearly that simple, and our convincing conclusion can be dead wrong.

Astrologers take every advantage of their inferential deficiencies. To them everything is a correspondence and nothing is a coincidence—an idea that

The State of Astrology

Under this heading "The State of Astrology: Where Are We Headed?" 19 well-known U.S. astrologers recently gave views that tended to differ markedly from the usual bright optimism. According to them, astrology in the United States today is: at a dead halt, in a stormy situation of uncertain outcome, generally of decreased quality, in a very sorry state, plagued by bickering, too commercial, not accepted by society, maturing, often a waste of time, insufficiently person-centered, too person-centered, making progress, too ingrown, in trouble, in chaos, ignorant of relevant disciplines, and best in the world for its sensitive understanding of the human condition.

The main need is for: a theoretical basis, more facts and better theories, qualified people to do research, wider horizons such as application to ecological issues, reintegration of the sacred and the scientific, rigorous scientific testing, more person-centeredness, investigation of underlying mechanisms, proper accreditation, new ideas, more professionalism, better accreditation, more sophistication, thorough testing, and scientific research. (The views in each category total less than 19 because some astrologers evaded the question.)

Here the majority view is that astrology is in trouble and in need of proper testing. Perhaps the most heretical view came from John Townley, a respected, widely published astrologer with two decades of experience: "I would say that most of the accusers of astrology are probably correct. They think that astrologers are 100-percent charlatans, but I would bring it down to 90 percent. Not necessarily even intentional charlatans. But . . . they are suffering from the same failing. Maybe 50 percent of the people out there are deliberately selling hokum straight ahead." (Source: *Astro*Talk,* May/June 1986)

casinos disprove daily. Thus a Sagittarian cavalry officer will be seen as confirming astrology (the centaur, symbol of Sagittarius, is half-man, half-horse) even though the occurrence is at chance level and everything else in his chart says he should be a banker. This confident use of glaring inconsistencies has been surveyed by Culver and Ianna (1984) and aptly named the "Gemini syndrome," after the two-faced propensities said to be typical of Gemini.

However, although our judgments may let us down, this is no reason to go to the opposite extreme—not even the most rational person makes a statistical study of dentists before deciding where to get his teeth fixed. On this basis there is no reason to suppose that when people go to an astrologer they are any less rational than when they go to a dentist. The point is that, if we want to know what is *really* going on, then we must be aware of our inferential deficiencies and act accordingly—which of course is what the scientific approach is all about. An excellent survey of human inference is provided by Nisbett and Ross (1980) and is essential reading for anyone wishing to understand why astrology is seen to work despite the lack of factual evidence.

Perhaps the central problem in astrology is that astrologers, like most people, including the orthodox professionals cited earlier, are not aware of their inferential deficiencies and do not act accordingly. If they were, and did, then the present shouting match between astrologers and critics might never have arisen, always assuming that the critics could make the corresponding attempt to become informed about astrology. The same is of course true of most other paranormal areas.

Charts vs. No Charts

If correct birth charts really are as essential to astrological practice as astrologers claim, then astrologers using charts should consistently outperform astrologers not using charts, i.e., simply guessing. I recently put this to the test in a blind trial reported in detail elsewhere (Dean 1985).

From a sample of 1,198 subjects who had taken the Eysenck Personality Inventory, I selected the most extroverted, most introverted, most stable, and most unstable, 60 of each. Mean age was 30; 72 percent were female; and all knew their birth times. These extreme subjects were equivalent to the top and bottom fifteenths in the general population. Extroversion and emotional stability were chosen because they are perhaps the most major and enduring of known personality factors (Eysenck and Eysenck 1985) and are supposed to be readily discernible in a birth chart (Dean 1986).

The birth charts of these subjects were given to 45 astrologers (mostly in the U.S. and U.K.) ranging from beginners to internationally recognized experts. Each astrologer indicated which extreme he thought each subject was and how confident (high, medium, or low) they were in each judgment. Most of the astrologers agreed that the test was a fair one. On the average the judgments took each astrologer nearly 20 hours, or 4 to 5 minutes per judgment. Another 45 astrologers did the same task (circling their responses on the response sheets) but without charts; these judgments took 20 minutes.

If charts are essential to astrological practice, then astrologers using charts should have a distinct edge over those not using charts. But the results (Table 4) showed no difference; if anything, the judgments were made worse by looking at charts.

Further analysis revealed more bad news for astrology. Judgments made with high confidence were no better than those made with low confidence. Judgments on which the astrologers agreed were no better than those on which they disagreed. Supposedly crucial factors, such as experience, technique, use of intuition, and birth data accuracy, made no difference. Everything remained stubbornly at chance level.

The most damning result was the poor agreement between astrologers, the mean correlation being 0.10 for judgments and 0.03 for confidence. This indicates that 60 astrologers would on average be split 33:27 on judgments and 31:29 on confidence. (A value of 0.7 or more is generally considered satisfactory, 0.4 is poor, and 0.25 or less is useless; these correspond to a split

TABLE 4

Were the Judgments of Astrologers Using Charts Better Than Those of Astrologers Not Using Charts?

	Judgments by 45 astrologers using subjects' birth charts		Judgments by 45 astrologers without charts, i.e., guessing	
Subjects	Judged extrovert	Judged introvert	Guessed extrovert	Guessed introvert
60 extroverts	1,472	1,228	1,401	1,299
60 introverts	1,461	1,239	1,363	1,337
Percent hits	50.2		50.7	
	Judged unstable	Judged stable	Guessed unstable	Guessed stable
60 unstable	1,488	1,212	1,239	1,461
60 stable	1,462	1,238	1,170	1,530
Percent hits	50.7		51.3	

Answer: No. If anything the astrologers' judgments were made worse by looking at birth charts. *Source:* Dean (1985)

in judgments of roughly 5:1, 5:2, and 5:3, respectively.) The agreement was little better for astrologers using much the same technique and did not improve with experience—if anything, experts showed worse agreement than beginners. Other studies have found mean correlations that are just as poor. Vernon Clark (1961), in a famous blind trial involving some of the world's best astrologers (for example, Charles Carter and Marc Edmund Jones), obtained results that on inspection reveal 0.13 for 20 astrologers matching 10 pairs of charts to case histories, and 0.12 for 30 astrologers judging 10 pairs of charts for intelligence. Macharg (1975) found 0.17 for 10 astrologers judging 30 charts for alcoholism. Ross (1975) found only 0.23 for 2 astrologers rating 102 charts on five 5-point scales of the Psychological Screening Inventory, even though both had received a similar training, both taught astrology at the same college in Miami, and both followed Rudhyar's person-centered approach. Vidmar (1979) obtained results that on inspection reveal 0.10 for 28 astrologers matching 5 pairs of charts to case histories. Fourie et al. (1980) found 0.16 for two astrologers rating 48 charts on eighteen 9-point scales of the 16PF Inventory. Steffert (1983) obtained results that on inspection reveal 0.03 for 27 astrologers judging the charts of 20 married couples for marital happiness. In other words, in none of these studies was the agreement between astrologers better than useless. If astrologers cannot even agree on what a chart indicates, then what price astrology?

Does It Matter?

If astrology does not need to be true, and if astrologers cannot agree on what a chart indicates, does it matter? The answer depends on where you are coming from. If astrology is used as entertainment or a religion, then it cannot possibly matter. Nor would it seem to matter if astrology is used like Rorschach inkblots to provide insight: Just as there is nothing really there in inkblots, so we need have no concern if there is nothing really there in celestial inkblots—at any rate we can hardly outlaw the latter while the former goes free.

But if astrology is presented as being not merely helpful but also true (and most astrology books do so present it) then on present evidence the client is being exposed to semi-institutionalized dishonesty and all the dangers that this implies. Clients seeking ways to regain control of their lives are not helped by hints that this responsibility can be passed, however slightly, to the stars. Notwithstanding the dictum that the stars incline but do not compel (and which, judging from the conversation at any astrology conference, no astrologer actually subscribes to), the remedy is simple: Astrologers wishing to be taken seriously must become more responsible. They must become aware of relevant research findings, they must desist from making claims at variance with the known facts, and they must label their product honestly so that the public is not misled. Something like CSICOP's astrology disclaimer would be a step in the right direction. Until this happens, the professional astrologer will remain a contradiction in terms. Best (1983), editor of *Correlation,* the scholarly journal of research into astrology, has put the matter bluntly: "We really have no alternative. Either we put our house in order or someone from the establishment will sooner or later take great delight in doing it for us, or, alternatively, taking it apart brick by brick." I might add that the codes of ethics adopted by astrological organizations are useless in this respect, because in effect they are concerned with skating elegantly and not with thin ice. Which brings me to the final question: If astrology does not need to be true, what is the legal position?

Astrology and the Law

Western law has traditionally (and unfairly) regarded astrologers as mere fortune tellers. And fortune telling is usually illegal. But the situation is changing. Today in many countries, including the U.K., the United States, and Australia, an astrologer is as near as the yellow pages. In the United States the legal position of astrologers was recently summarized by the AFAN (1983) as follows: "As matters stand now, there are precedents for conviction of astrologers employing any and all of the usual ways of circumventing the fortune-telling laws: religion, grandfather clause, the Evangeline Adams case, the 'truth' of astrology, and just about any other defense you can think of has been tossed out of one court or another, largely due to the lack of committed,

adequate defense."

However, in 1984 there were two landmark decisions affecting astrology. The California Supreme Court of Appeals and a federal court both held that astrology and fortune telling are permitted free speech under the First Amendment of the U.S. Constitution (AFAN 1984, 1985). Among other things the First Amendment prohibits any law "abridging the freedom of speech." This was the first instance of a federal court ruling on astrology and fortune telling, the judge holding that "one need not have a scientific basis for a belief in order to have a constitutional right to utter speech based on that belief" (AFAN 1985). So even though astrology does not need to be true, the current U.S. legal view is that you have every right to practice it, just as you have every right to set up a Flat Earth society.

The Evangeline Adams case mentioned above was until recently the only instance in Western law where the details of astrological practice had been thoroughly examined in court. Because the case set a precedent and the verdict supported astrology, it is worth looking at.

The Strange Case of Evangeline Adams

The trial in 1914 of U.S. astrologer Evangeline Adams is famous among astrologers. The following account from the *Larousse Encyclopedia of Astrology* (Brau et al. 1980) is typical of those published in astrology books:

> Arrested in New York City in 1914 on a charge of fortune-telling, Adams insisted on standing trial. She came to court armed with reference books, expounded the principles of astrology, and illustrated its practice by reading a blind chart that turned out to be that of the judge's son. The judge was so impressed by her character and intelligence that he ruled in her favor, concluding that "the defendant raises astrology to the dignity of an exact science."

This gives the impression that the case was won because astrology was shown to be accurate and scientific. However, inspection of the court record tells a different story (New York Criminal Reports 1914). In the judge's opinion Adams did not pretend to tell fortunes. She merely indicated what the birth chart was supposed to mean and gave "no assurance that this or that eventually would take place." Therefore "she violated no law," and Adams was acquitted. There is only an indirect mention of the blind reading, and no mention of its subject or accuracy. Clearly the acquittal had nothing to do with astrology being accurate or scientific, and indeed the judge specifically states that the practice of astrology was "but incidental to the whole case."

Further inspection of the court record reveals a curious situation. I mentioned earlier the astrological dictum that individual factors must not be judged in isolation. Yet according to the following examples taken verbatim from the court record, this is exactly what Adams did:

Interpretation	Chart factor
Tendency to have great periods of depression.	Mercury in Capricorn
Strange fatality connected with mother's life.	Moon conjunct Neptune
Not likely to marry the first man to whom she was engaged . . . it indicated temptations.	Sun conjunct Uranus
Ambitious but lacking in confidence.	Saturn rising

Today no serious astrologer would dream of making such interpretations. For example, before finding a tendency to depression it would be necessary to examine at least the moon, Venus, Saturn, Neptune, cadent houses, triplicities, quadruplicities, and afflictions generally (Carter 1954). In other words, no astrologer could possibly claim that Adams's interpretations were accurate, let alone scientific.

So how could the judge conclude that Adams "raises astrology to the dignity of an exact science"? The answer is that he didn't, at least not in the sense implied by the quotation. The quotation is in fact incomplete and has been taken out of context, not from the final judgment, as we are led to believe, but from the introduction to the summing up. This introduction mentions that Adams had been a professional astrologer since 1897, that she had produced books in court, that her reading of a chart was "an absolutely mechanical, mathematical process," that "she claims that astrology never makes a mistake," that chart forms are used, and that "the defendant raises astrology to the dignity of an exact science—one of vibration, and she claims that all planets represent different forces of the universe." In other words, the judge is not saying that astrology is an exact science, only that Adams claims it to be so. So, in this legal case at least, contrary to what astrologers would have us believe, astrology did not need to be true.

Conclusion to Parts 1 and 2

In the past ten years, various studies have addressed astrology (the real thing, not popular nonsense) on the astrologer's terms. The results of these studies are in agreement, and their implications are clear: Astrology does not need to be true in order to work; and, contrary to the claims of astrologers, authentic birth charts are not essential. What matters is that astrology is believed to be true and that authentic birth charts are believed to be essential.

After surveying modern beliefs in astrology, Fullam (1984) comes to much the same conclusion:

> However, a system does not have to be real to be accepted as true as long as it is satisfying. Astrology has flourished because it is a framework within which people can discuss and look for meaning in their lives at the most superficial to the deepest levels of involvement in astrology.

Similarly, Kelly and Krutzen (1983) reached much the same conclusion

after a detailed analysis of Rudhyar's humanistic astrology, which according to many astrologers is the *real* real thing:

> The humanistic astrology of Dane Rudhyar is praiseworthy in its aims and shows an undoubted breadth of vision and concern for humanity. But it is dressed in obscurity and obfuscation. Worse, it . . . [requires] that no belief about anything could be false, thereby obliterating the distinction between knowledge and belief.

Thus the real thing emerges as a kind of psychological chewing gum, satisfying but ultimately without real substance. This does not deny the possibility that some as-yet-untested features of chart interpretation may work (e.g., indication of trends), or that some entirely new and valid astrological technique may be discovered, or that Michel Gauquelin's Mars effect may be eventually proved (the effect is still too weak to be considered as support for astrological practice), or that certain astrologers may achieve positive results in tests where others have failed, in which case the onus is on astrologers to demonstrate it. Nor does it deny the therapeutic utility of astrological beliefs—if invalid beliefs worked like a charm in phrenology they can do the same in astrology. What *is* denied is the essential truth of the real thing as practiced by most astrologers. As Dean and Mather (1985) note:

> Astrologers are like phrenologists: their systems cover the same ground, they apply them to the same kinds of people, they turn the same blind eye to the same lack of experimental evidence, and they are convinced for precisely the same reasons that everything works. But the phrenologists were wrong. So why shouldn't critics conclude for precisely the same reasons that astrologers are wrong?

Should astrologers wish to deny a state of affairs so contrary to their claims, all they have to do is perform appropriate tests. After all, why have a shouting match when you can have tests? However, it could be argued that the existence of mutually incompatible systems throughout astrology (for example, tropical and sidereal zodiacs), all of which are nevertheless seen as completely valid by their users, has already put this point to the test and given us convincing answers.

Acknowledgments

This paper is an updated version of one given at the Second Annual Astrological Research Conference, Institute of Psychiatry, London, on November 28, 1981. Thanks are due to Joanna Ashmun, Graham Douglas, Maureen Perkins, Austin Levy, Arthur Mather, Rudolf Smit, Drs. Rowan Bayne, Susan Blackmore, David Nias, Michael Startup, Profs. Ray Hyman, Ivan Kelly, and Andrew Neher for helpful comments, and to Profs. Ray Hyman, Ivan Kelly, and Marcello Truzzi for useful reference material. Readers who

have trouble locating specific reference material may write to me at Box 466, Subiaco 6008, Western Australia.

References

AFAN. 1983. AFAN to defend Shirley in Superior Court. *AFAN Newsletter,* 2(1):1 and 9 (October).

———. 1984. Major legal victory for astrology. *AFAN Newsletter,* 2(4):1-2 (July).

———. 1985. Astrology wins in Federal Court! *AFAN Newsletter,* 3(2):1-2 (January). A legal information and legislative action kit for astrologers is available for $25 from AFAN Legal Information Committee, 1754 Fell Street, San Francisco, CA 94117.

Best, S. 1983. Astrological counselling and psychotherapy: Critique and recommendations. *Astrological Journal,* 25(3):182-189 (Summer).

Blackmore, S. J. 1983. Divination with tarot cards: An empirical study. *Journal of the Society for Psychical Research,* 52:97-101.

Brau, J. L., Weaver, H., and Edmands, A. 1980. *Larousse Encyclopedia of Astrology.* New York: McGraw-Hill, p. 21.

Carter, C. E. O. 1954. *An Encyclopedia of Psychological Astrology,* 4th ed. London: Theosophical Publishing House, pp. 124, 125, 167.

Clark, V. 1961. Experimental astrology. *In Search,* Spring: 102-112.

Connor, J. W. 1984. Misperception, folk belief, and the occult: A cognitive guide to understanding. SKEPTICAL INQUIRER, 8:344-354 (Summer).

Culver, R. B., and Ianna, P. A. 1984. *The Gemini Syndrome: A Scientific Examination of Astrology.* Buffalo, N.Y.: Prometheus, pp. 136-137, 149-150.

Dean. G. 1985. Can astrology predict E and N? Part 2. The whole chart. *Correlation,* 5(2):2-24 (November). *Correlation* is available from Correlation Distribution, 2 Waltham Close, West Bridgford, Notts NG2 6 LE, England.

———. 1986. Can astrologer predict E and N? Part 3. Discussion and further research. *Correlation,* 6(2), in press (December 1986). When ranked in terms of validity and reliability against palmistry, graphology, and orthodox psychological tests, astrology comes out at the bottom. A detailed survey of the evidence with 110 references.

Dean, G., and Mather, A. 1977. *Recent Advances in Natal Astrology: A Critical Review 1900-1976.* Subiaco, Western Australia: Analogic.

———. 1985. Superprize results: Six winners—and news of a new prize to challenge the critics. Part 1. *Astrological Journal,* 28(1):23-30 (Winter). Contains major editorial errors (none relevant to phrenology). An error-free version appears in *FAA Journal* [Australia], 15(3-4):19-32 (Sept.-Dec. 1985).

Dickson, D. H., and Kelly, I. W. 1985. The Barnum effect in personality assessment: A review of the literature. *Psychological Reports,* 57:367-382.

Dlhopolsky, J. G. 1983. A test of numerology. SKEPTICAL INQUIRER, 7(3):53-56 (Spring).

Eysenck, H. J., and Eysenck, M. W. 1985. *Personality and Individual Differences: A Natural Science Approach.* New York: Plenum. 1,200 refs., extremely readable, essential for anyone interested in using personality questionnaires to test astrology.

Fourie, D. P., Coetzee, C., and Costello, D. 1980. Astrology and personality: Sun-sign or chart? *South African Journal of Psychology,* 10:104-106, and personal communication 1986.

Fullam, F. A. 1984. *Contemporary Belief in Astrology.* Master's thesis, Department of Sociology, University of Chicago, July, p. 67.

Glick, P., and Snyder, M. 1986. Self-fulfilling prophecy: The psychology of belief in astrology. *Humanist,* May/June, pp. 20-25, 50.

Grange, C. 1982. The Barnum effect: Its relevance for non-scientific methods of personality assessment. Unpublished study, Loughborough University of Technology, Loughborough, U.K.

Hand, R. 1981. *Horoscope Symbols.* Rockport, Mass.: Para Research, pp. 25-26.

Hyman, R. 1977. Cold reading: How to convince strangers that you know all about them. *Zetetic* (now SKEPTICAL INQUIRER), 1(2):18-37 (Spring-Summer).

———. 1981. The psychic reading. In *The Clever Hans Phenomenon: Communication with*

Horses, Whales, Apes, and People, edited by T. A. Sebeok and R. Rosenthal, pp. 169-181. New York: New York Academy of Sciences. In the Clever Hans effect, information unwittingly emitted by the client is fed back to the client, who is thus persuaded to see marvels where none exists.

Kallai, E. 1985. *Psychological Factors that Influence the Belief in Horoscopes.* Master's thesis, Department of Psychology, The Hebrew University, Jerusalem. In Hebrew with English abstract. And personal communication 1986.

Kelly, I. W., and Krutzen, R. W. 1983. Humanistic astrology: A critique. SKEPTICAL INQUIRER, 8:62-73 (Fall).

Macharg, S. J. 1975. *The Use of the Natal Chart in the Identification of Alcoholism and a Comparison of Its Diagnostic Efficacy with the MMPI.* Ph.D. dissertation (education), University of Southern California, p. 77.

Marks, D., and Kammann, R. 1980. *The Psychology of the Psychic.* Buffalo, N.Y.: Prometheus Books, pp. 176-186. The examples of subjective validation given by Marks and Kammann are examples of hindsight bias.

Naftulin, D. H., Ware, J. E., and Donnelly, F. A. 1973. The Doctor Fox lecture: A paradigm of educational seduction. *Journal of Medical Education,* 48:630-635. Dr. Fox was an actor who was coached to give a highly entertaining but otherwise meaningless one-hour lecture on games theory to various professionals such as psychiatrists and social workers. They found his talk to be clear and stimulating, and nobody realized it was nonsense.

Neher, A. 1980. *The Psychology of Transcendence.* Englewood Cliffs, N.J.: Prentice-Hall, pp. 239-242, and personal communication 1985.

New York Criminal Reports. 1914. Vol. 32. The people ex rel Adele D. Priess vs. Evangeline S. Adams. Priess was a 49-year-old woman detective acting on behalf of the New York police. The report consists of four pages of prosecuting testimony, including one page of comment, plus eight pages of defending testimony and six pages of summing up.

Niehenke, P. 1984. The validity of astrological aspects: An empirical inquiry. *Astro-Psychological Problems,* 2(3):10-15. APP is available from BP 317, 75229 Paris Cedex 05, France.

Nisbett, R., and Ross, L. 1980. *Human Inference: Strategies and Shortcomings of Social Judgement.* Englewood Cliffs, N.J.: Prentice-Hall. A concise and more readable survey that cites Nisbett and Ross is R. M. Hogarth, *Judgement and Choice: The Psychology of Decision,* Wiley, New York, 1980.

Rosenblum, B. 1983. *The Astrologer's Guide to Counseling: Astrology's Role in the Helping Professions.* Reno, Nev.: CRCS.

Ross, L. H. 1975. *The Relationship Between the Ratings of an Established Personality Inventory and Those of Two Practitioners of Rudhyar's Person-Centered Approach.* Ph.D. thesis (education), Nova University, Fort Lauderdale, Fla., p. 44.

Russell, D., and Jones, W. H. 1980. When superstition fails: Reactions to disconfirmation of paranormal beliefs. *Personality and Social Psychology Bulletin,* 6:83-88.

Steffert, B. 1983. Marital bliss or misery: Can synastry distinguish? *Astrological Journal,* 25(3):211-213.

Tyson, G. A. 1984. An empirical test of the astrological theory of personality. *Personality and Individual Differences,* 5:247-250.

Vidmar, J. E. 1979. Astrological discrimination between authentic and spurious birthdates. *Cosmecology Bulletin,* nos. 8 and 9:56-90. Reprinted from Ph.D. dissertation (education) of the same name, University of Northern Colorado, 1978. •