



Who believes in astrology? Effect of favorableness of astrologically derived personality descriptions on acceptance of astrology

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Abstract

Participants judged contemporary personality descriptions of odd-numbered astrological Sun signs to be more favorable than descriptions of even-numbered signs. Those born with the Sun in an odd-numbered sign expressed more belief in astrology than those born under an even-numbered Sun sign. These findings suggest that one determinant of acceptance of astrology is the favorableness of the character analysis it offers. Implications for previous research on belief in astrology are discussed. © 2001 Elsevier Science Ltd. All rights reserved.

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1. Introduction

Many researchers have noted both the widespread contemporary belief in astrology and the extent to which people exposed to astrological character analysis readily accept the personality descriptions it offers them (Glick, Gottesman & Jolton, 1989; Snyder, 1974; Snyder, Larsen & Bloom, 1976). Recent findings have suggested that this acceptance need not be short-lived. People may, in fact, incorporate astrologically based personality characteristics into their long-term self-concepts. Hamilton (1995) found that undergraduates, presented with one-paragraph descriptions of the characteristics of their own astrological “Sun sign” and an alternative Sun sign, chose their own Sun sign paragraph as a better representation of their personality than the alternative Sun sign description. Notably, this acceptance did not depend on participants’ being aware that the descriptions offered them were astrological. Van Rooij (1999) found, in a Dutch sample of varying backgrounds, that participants presented with individual trait words associated with the

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personality descriptions of each of the 12 Sun signs, chose the traits of their own Sun sign as more personally descriptive than the traits associated with the other 11 signs. Van Rooij's subjects had not been told that the traits in question were astrologically-derived.

A somewhat older line of research investigates the historical division of the 12 zodiac signs into six "positive", or odd-numbered signs (Aries, Gemini, Leo, Libra, Sagittarius, Aquarius) and six "negative", or even-numbered ones (Taurus, Cancer, Virgo, Scorpio, Capricorn, Pisces). According to astrological theory, natives of "positive" signs are likely to be extraverted while natives of "negative" signs are likely to be introverted. Some researchers (Mayo, White & Eysenck, 1978; Smithers & Cooper, 1978) have found that participants with positive Sun signs score in a more extraverted direction on self-report personality inventories; this held true even in a study (Van Rooij, 1994) in which no cues to the connection of the research with astrology were available to subjects. These results, too, suggest that persons exposed to astrological character analysis are likely to incorporate this information into long-term self-concept. An alternative explanation — that astrology and its derived personality descriptions are, in fact, valid — is rendered less likely by the finding that this tendency to endorse astrology-consistent personality descriptions is found only in those people with some knowledge of astrology (Hamilton, 1995; Pawlik & Buse, 1979; Van Rooij, 1994).

What factors influence the likelihood that the person first exposed to astrology will, in fact, accept the personality description offered and, perhaps, incorporate it into his or her long-term self-image? One possible influence is the favorableness of the proposed description. Many studies have found that favorable, or socially desirable, personality descriptions are more likely to be accepted as true about the self than are unfavorable ones (Collins, Dmitruk & Ranney 1977; Glick et al., 1989). While some researchers (Silverman, 1971) have claimed that astrological character sketches are almost uniformly flattering, even a cursory inspection of popular astrology books (e.g. Kempton-Smith, 1982; Lewi, 1990) suggests that this claim is untrue. Moreover, Western astrology has traditionally considered some zodiac signs to be more favorable or, in modern parlance, more socially desirable, than others (Carter, 1978; Hopper, 1938). In particular, the six "positive" or odd-numbered signs have historically been considered masculine and hence more "godlike, perfect, and powerful" (Hopper, p. 101) than the six feminine, "negative", and even-numbered signs.

We might expect, then, that natives of odd-numbered, positive, Sun signs would express more acceptance of, or belief in, astrology than natives of even-numbered, negative, signs. The research reported here poses two questions. First, are contemporary descriptions of odd-numbered Sun signs indeed more favorable than current descriptions of even-numbered signs? Second, do those with a positive, odd-numbered Sun sign express more belief in astrology than natives of the negative, even-numbered signs?

2. Study 1

2.1. Method

2.1.1. Participants

Forty-one males and 62 females participated in Study 1. Ages ranged from 17 to 62, with a mean of 25.7. Seventy-seven were students in introductory level Psychology courses at a Mid-

western, public, 2-year, transfer institution. The remaining 26 were faculty or staff members of that institution. Student participants volunteered for the research as part of their classroom activity while faculty and staff members were approached individually by the researcher.

2.1.2. *Materials and procedure*

One-paragraph descriptions of each of the 12 Sun signs were excerpted from the astrology text, “*Write your own horoscope*” by Joseph A. Goodavage, first published in 1968 and reprinted in 1991 and available in popular, mainstream, chain bookstores. Clues to the astrological nature of these descriptions, such as references to ruling planets, were deleted. A sample description of the sign (Libra) judged most favorable by participants in the current studies and a description of the sign deemed least favorable (Taurus) are provided in the Appendix.

Participants, who were initially told the study was about “judgment of personality”, were each given two Sun sign descriptions, one for an odd-numbered sign (e.g. Aries) and the other for the even-numbered sign immediately following it in the zodiac (e.g. Taurus). Order of presentation of odd- and even-numbered descriptions was varied. Immediately following each description, participants indicated, on 7-point Likert-type scales, answers to the following questions: “How happy would you be to hear yourself described this way?”, “How flattering a description do you think this is?”, “How much would you like to actually possess these personality traits?”, and “How positive or negative a description do you think this is”? After completing these questions for both descriptions, subjects indicated on 7-point Likert-type scales whether they believed in astrology, how much they knew about astrology, and whether they had suspected the personality descriptions presented were astrological (anchored by “not at all” and “I knew for sure”).

2.2. *Results*

Reliability analysis of the four questions pertaining to the favorableness of the odd-numbered, positive, signs elicited a Cronbach’s α of 0.92 ($n = 103$). Cronbach’s α for the even-numbered, negative, signs was 0.93 ($n = 103$). The four questions pertaining to the odd-numbered signs were thus collapsed into a single “positive sign” favorableness rating and the four questions pertaining to the even-numbered signs were collapsed into a single “negative sign” favorableness rating. An analysis of order effects (positive or negative sign presented first) revealed no effect of order on ratings (all P ’s > 0.62). Therefore, effects of order are ignored in subsequent analyses.

Paired t -tests on the favorableness ratings of the positive, odd-numbered signs and the negative, even-numbered signs revealed that the odd-numbered sign descriptions were considered significantly more favorable ($M = 4.8$) than the even-numbered [$M = 4.0$, $t(102) = 4.89$, $P < 0.001$]. A separate analysis was performed using only those participants who reported no suspicion at all that the personality descriptions were astrological in origin. Paired t -tests on these 46 subjects revealed the same pattern of results. Odd-numbered sign descriptions were considered more positive ($M = 4.7$) than even-numbered descriptions [$M = 3.9$, $t(45) = 3.22$, $P < 0.005$].

Few participants indicated strong belief in astrology. Only 8% rated this question “6” or “7”. On the other hand, relatively few expressed completely disbelief: only 25% rated this question “1”. Average belief was 3.1 with a standard deviation of 1.7. Few subjects reported great knowledge about astrology, with 8% rating this question “6” or “7”. Only 19% however con-

sidered themselves “not at all knowledgeable”. Average self-report knowledge was 2.8, with a standard deviation of 1.9. Forty-four percent of participants reported no suspicion at all of the astrological origin of the descriptions and none reported having “known for sure”. Average suspicion was 2.8, with a standard deviation of 1.5.

Pearson product-moment correlations revealed no significant relationship between favorableness ratings and belief in astrology, self-report knowledge of astrology, or suspicion that the descriptions were astrological (all P 's > 0.22). Belief in astrology was significantly correlated with self-report knowledge of astrology, $r(100) = 0.54$, $P < 0.001$, and with suspicion of the astrological origin of the descriptions, $r(100) = 0.55$, $P < 0.001$. Knowledge of astrology and suspicion were also significantly correlated, $r(101) = 0.48$, $P < 0.001$. Those subjects who believed more in astrology tended to report being more knowledgeable about it and were more likely to suspect that the descriptions presented were astrological in origin.

3. Study 2

3.1. Method

3.1.1. Participants

Ninety-six undergraduate students in introductory-level Psychology classes at a Midwestern, public, 2-year transfer institution participated in return for course credit. Thirty-eight were male and 57 female. One student did not report gender.

3.1.2. Materials and procedure

The same materials and procedure were used in Study 2 as were used in Study 1 with the following addition. After answering questions about belief in and knowledge of astrology and suspicions regarding the astrological origin of the personality descriptions, participants were asked their month and day of birth and their astrology sign.

3.2. Results

Reliability analyses of the four questions pertaining to the favorableness of the positive Sun signs elicited a Cronbach's α of 0.92 ($n = 96$). Cronbach's α for the negative signs was 0.94 ($n = 96$). Accordingly, the four questions pertaining to the odd-numbered signs were collapsed into a single “positive sign” favorableness rating and the four pertaining to the even-numbered signs were collapsed into a single “negative sign” favorableness rating. Analysis of order effects revealed no effect of order of presentation on favorableness ratings (all P 's > 0.5). Effects of order are thus ignored in subsequent analyses.

A 2 (positive or negative birth sign) \times 2 (positive or negative described sign) analysis of variance with favorableness rating as the dependent measure revealed a main effect for described sign, $F(1,90) = 10.8$, $P < 0.001$. As in Study 1, positive signs were considered significantly more favorable ($M = 4.8$) than negative signs ($M = 4.2$). No main effect for birth sign, $F(1,90) = 2.34$, $P > 0.12$, nor any interaction between birth sign and described sign, $F(1,90) = 0.91$, $P > 0.33$, emerged.

Participants were grouped into odd-numbered Sun sign natives and even-numbered Sun sign natives by reference to their reported astrological sign and birth-date. The four subjects who either did not provide these data or whose reported astrological sign conflicted with that indicated by their birth-date were excluded from further analysis. *t*-Tests revealed that odd-numbered and even-numbered Sun sign natives did not differ in self-report knowledge about astrology or suspicion of the astrological origin of the presented descriptions (all *P*'s > 0.30). Odd-numbered subjects expressed significantly more belief in astrology ($M = 3.7$) than did even-numbered subjects [$M = 3.0$, $t(91) = 2.1$, $P < 0.05$].

As in Study 1, few participants expressed great belief in astrology; 10% rated belief "6" or "7". But, again, relatively few reported no belief at all; 15% rated this question "1". Average belief score was 3.4, with a standard deviation of 1.7. Average self-report knowledge about astrology was 3.3 with a standard deviation of 1.6. Few subjects reported no knowledge at all (15% rated this question "1") while even fewer indicated being very knowledgeable (5% rated this question "6" or "7"). Interestingly, the majority of those reporting no knowledge nonetheless knew their correct Sun sign. No participant reported "knowing for sure" that the personality descriptions were astrological in origin and 22% reported having had no suspicion of this at all. Average suspicion rating was 3.0, with a standard deviation of 1.5. Belief in astrology was significantly correlated with self-report knowledge about it, $r(94) = 0.55$, $P < 0.001$ and with suspicion of the descriptions' astrological nature, $r(94) = 0.33$, $P < 0.001$. Knowledge of astrology and suspicion were significantly correlated, $r(94) = 0.45$, $P < 0.001$. Those with greater belief in astrology also considered themselves more knowledgeable about it and were more likely to have suspected the astrological nature of the personality descriptions.

4. Discussion

Respondents with middling levels of belief in, and knowledge about, astrology judged contemporary personality descriptions of odd-numbered astrological Sun signs to be more favorable than contemporary descriptions of even-numbered signs. It appears, then, that the traditional division within Western astrology between the six masculine, odd-numbered, and fortunate zodiac signs and the six feminine, even-numbered, and relatively unfortunate ones remains.

Natives of odd-numbered signs expressed more belief in astrology than those whose Sun signs were even-numbered. These results suggest that one determinant of acceptance of astrology is the favorableness, or social desirability, of the particular character analysis it offers. Those for whom astrological theory provides a more attractive self-portrait are more likely to express belief in the validity of astrology. Note that the negative astrological signs may have been "negative" only in comparison to the positive sign descriptions. In both Study 1 and Study 2, the average favorableness ratings for the negative signs were at, or slightly above, the scale midpoint. Thus, it may not be that unflattering self-portraits are repelling some potential believers born under negative signs but rather that the more frankly flattering descriptions offered the positive sign natives, exert a greater attraction than the mixed portraits confronting those born under negative signs.

These results are similar to those of Glick et al. (1989), who found that high school students initially skeptical about astrology were more likely both to accept the personality description it offered them and to increase their belief in astrology as a whole, if that description were favor-

able. Glick et al., however, assessed change of belief immediately following presentation of the personality analyses; they did not investigate how long-lasting this increase was likely to be. The present study suggests that the effect of favorableness is likely to be at least fairly long-lasting since our participants had, presumably, been exposed to their own Sun sign descriptions well before entering the study.

The present findings may also provide an explanation for some currently inexplicable experimental results. Van Rooij (1994) replicated Mayo et al.'s (1978) finding that, at least among people with some knowledge of astrology, those whose Sun signs were positive attributed more extraverted characteristics to themselves than did those with the Sun in a negative sign. Informing subjects that the study was astrological increased this tendency to respond in an astrology-consistent way. This effect, however, was most pronounced in positive Sun sign natives. Why should those whose Suns are in positive signs be more influenced by a cue to the astrological nature of the study than negative Sun sign natives? Van Rooij suggested that this difference is consistent with astrological prediction and, thus, may provide some validation for astrological theory. If, however, as the present findings suggest, those with positive Sun signs give more credence to astrology than negative Sun sign natives, then the greater effect of the astrological cue on them may simply reflect this difference in level of belief.

Finally, the current research addresses the prevalence of belief in astrology within contemporary American society. Shaughnessy, Neely, Manz and Nystul (1990) found that the majority of their southwestern United States university student respondents expressed some degree of belief in astrology. Hamilton (1995), in a college sample from Southern California, also found the majority unwilling to reject astrological claims. The current study replicated these results in that, while most participants did not endorse strong belief in astrology, less than a quarter reported no belief at all. That this level of credence should be found in a mid-western, non-urban, sample suggests that some degree of openness to astrology may be widespread in American society and that further investigation of the determinants, and consequences, of that belief may be fruitful.

Appendix

Libra Personality Description

You love peace, beauty, and harmony in your life. Chances are you either have married — or will marry — comparatively early in life. You dislike drudgery or any kind of dirty work. You are modest, artistically inclined, neat and particular. You love the arts and all cultural pleasures and amusements. You make the most agreeable and pleasant sort of friend, and are a natural peacemaker. At heart, you are a perfectionist and are completely unhappy when placed in an environment of conflict or discord. You desire peace, justice and harmony in all things. You are sensitive to the conditions of friends and associates; this is particularly so in regards to your marriage or business partner. You have a sure sense of equilibrium; you are usually known to be charming, kind, easy-going, courteous and agreeable. You may be artistically or musically-inclined. You can usually be found wherever there are happy social activities. You enjoy social success through your pleasant disposition and cheerful outlook.

Taurus Personality Description

You like to take your time about things. You are extremely patient and have a pleasant, melodious voice. You are gentle and yielding when things are going smoothly, but if provoked you become angry, even furious, and difficult to appease. You are constructive, methodological and deliberate, but not very original. You'd rather follow the accepted and reliable paths worn by others. There are times when your natural caution and prudence degenerate into obstinacy and stubbornness. This is when you are too heavy and possibly something of a bore. You are stable, firm, self-reliant and persistent. You are willing and able to wait a long time for your plans to jell. You have an inordinate love of comfort and ease; the physical pleasures hold a great deal of interest for you. You have a love of peace and beauty in nature. You love amusements, good books, music and art. You have excellent powers of endurance, a sound sense of material values. Despite what is said about your love of leisure and contentment, you can be a hard, methodical worker as long as there are no sudden changes and if security is the ultimate goal. You are possessive, affectionate, and sensual, completely aware of the powers of your body.

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