

**An Evaluation of
“The Effect of Horoscopes on Women’s Relationships”
and a new Awareness of Astrology Questionnaire
by James Brockbank**

Abstract

The purpose of this paper is threefold: firstly, critically to examine the methodology in Blackmore and Seebold’s “The Effect of Horoscopes on Women’s Relationships;” secondly, to determine whether a similar awareness of astrology questionnaire, distributed to a different group of women, confirms the Blackmore and Seebold results; and thirdly, to consider the implications of this new awareness of astrology test.

The Blackmore and Seebold Experiment

The Purpose of the Experiment

According to Blackmore and Seebold, astrology columns in newspapers and magazines are widely read.² However, “extensive scientific research has failed to support most of the claims of astrology”.³ If our behaviour is not affected by what we read this does not matter, but if our behaviour is affected by what we read, “then (we) are potentially basing (our) lives on false information, and this does matter, both for the individuals concerned and for everyone else”.⁴

Blackmore and Seebold say that there have been few surveys in which the participants have been asked whether or not their behaviour is affected by reading astrology columns. When the question has been asked, most people have responded by saying that it is not affected by what they read in astrology columns.⁵ “However, even if people claim not to be affected, we could not know whether they were right in that self assessment. It may be the case that people are affected by their horoscopes while remaining convinced that they are not”.⁶ Their experiment is meant to help determine whether or not astrological columns do have an effect on people’s behaviour. If they do have an effect, then Blackmore and Seebold appear to believe that sun sign columns should carry a disclaimer “...in compliance with CSICOP recommendations...”.⁷

The Experiment

46 women undergraduates from The University of the West of England, with a mean age of 26, were given a relationship questionnaire, and an awareness of astrology questionnaire. Two weeks later they were each given a personalised astrological printout, based on the Sun sign of the participant, giving advice on a number of matters. In the middle of each printout there was advice on love and

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relationships; 24 of the participants were given advice positive in tone, and 24 advice which was neutral in tone. About a month later, they were given the relationship questionnaire again.

The Results

Two matters were being tested. The first was whether as a result of receiving this astrological advice participants gave different answers to the relationship questionnaire indicating a change in behaviour. The differences did not reach statistical significance. The second matter was whether those participants who scored high marks on the astrological awareness test were more likely to change their behaviour. For the “‘positive’ group the correlation was positive and significant... (for) the neutral group...positive but not significant...”.⁸

The Conclusions

Despite the lack of any statistical significance from their relationship questionnaire, Blackmore and Seebold argue that the results tend in the “expected direction”, by which they mean that those participants who received positive love advice had slightly higher scores in the second relationship test, while the scores of those who received neutral advice remained the same. From this they conclude, that “Such effects are important because they could potentially limit women’s personal growth, distort their relationships and reduce their own control over the most intimate aspects of their lives”.⁹ In addition, as their awareness of the astrology questionnaire showed that their participants had detailed knowledge of astrology, they claim that the “results confirm the strong influence of astrology on women’s lives”, and that “these results suggest that astrology may influence women’s behaviour in many ways”.¹⁰

However, as Ertel has pointed out, given that the effects shown in the relationship test were statistically insignificant, these effects cannot be used to support their view that astrology columns distort relationships and limit personal growth.¹¹ Further, as Ertel again points out, however positive their astrological awareness test, and whatever the correlation between the astrological awareness test and the relationship test, given that they have failed to show any change in their participants’ behaviour, they can draw no conclusion on how astrology might affect that behaviour.¹²

The Methodology

The experiment produced no positive results, but it might be thought that it is worth replicating. However, the methodology is so poor that in its current format the experiment should not be repeated.

The premise of the experiment is that because there is no scientific (empirical) evidence to support astrology, anyone who follows astrological advice is potentially harming themselves or limiting their growth. However, this is no more than an assertion, which appears to be based on the assumption that people follow astrological advice because they believe it is scientific (empirical). This assumption is no more than an unproven hypothesis. It is quite possible for

someone to believe that there is no scientific evidence (empirical) to support astrology but still believe that it makes sense to take astrological considerations into any major decision in life. Equally, it is quite possible for someone to believe that currently there is no empirical evidence to support astrology, but that in the future, empirical support will be found. It would be an extreme authoritarian position to argue that people should behave only in a manner which has empirical support, whatever that might mean, and however it might be obtained. Presumably, many Christians are aware that there is no scientific evidence which proves the existence of God, but they do not have a problem accepting that while behaving in life in accordance with their Christian beliefs.

However, the real problem with this experiment is with the methodology. If Blackmore and Seebold had found that the second relationship questionnaire was statistically different from the first relationship questionnaire, then they would take this as support for their hypothesis, that people do change their behaviour because of astrological advice. This assumes three things, none of which is necessarily true, and all of which are doubtful:

1. It assumes that if people do follow the advice that they read in an astrology column, they are following it because it is astrological. However, they may act on the advice because they think it is good advice, despite the fact that it is astrological.
2. It assumes that the change in relationship is due to a change in behaviour of the participant; but it could be due to other factors which have nothing to do with the participant's behaviour.
3. It assumes that if the change of relationship is due to a change in the participant's behaviour, that the behavioural change is related to the advice read in the horoscope, but it could be related to any number of other factors in the participant's life.

These points can best be illustrated by considering the advice that their participants were actually given, and some of the relationship questions that they actually answered. The two pieces of advice given to participants with their Sun sign in Pisces were:

Neutral: "Brace yourself to put more effort into personal relationships this month. Problems can be easily overcome by taking time out to listen to each other's needs. You need to remember that when difficulties arise it takes two to make a relationship work harmoniously. Allowing relationships priority in your agenda this month is essential. Emotional issues are an important aspect of people's lives".

Positive: "Your love life is looking stronger and more passionate this month. Allowing your partner an insight into what turns you on, and telling them how you really feel will enable the two of you to share your fantasies and dreams.

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Thus together you can explore new and exciting territories. By sharing and indulging in your fantasies your relationship will reach new and heady heights".¹³

This advice highlights a separate problem, of which Blackmore and Seebold appear to be unaware, namely that with sun sign columns it is never going to be clear exactly what you are testing. If you have already made a decision on how to behave, have perhaps decided to buy a new home, it is possible for an astrologer to tell you when, from an astrological perspective, it would be a good time to buy. We might say that this advice is "pure astrology". However, in a sun sign column, in which the writer might be giving general advice on relationships, he/she will temper their advice in accordance with their own prejudices, their own views on the matter on which they are giving advice, and their understanding of their readers. Their advice will contain non-astrological influences, and therefore will not be "pure astrology". If one is going to attempt to establish whether people change their behaviour in accordance with astrological advice read in sun sign columns, it is necessary to try to make that advice "pure astrology", and limit the non-astrological influences. Blackmore and Seebold appear to do the opposite. The advice given to those with sun in Pisces seems to be completely non-astrological and, apparently, was made up, but was checked by an astrologer "to ensure that they sounded realistic and appropriate".¹⁴ Given that the advice is non-astrological, if Blackmore and Seebold had been able to show a relationship between this advice and a change of behaviour, all they would have shown is that people acting on non-astrological advice, which they thought was astrological, changed their behaviour. This is not the same as showing that people acting on astrological advice changed their behaviour. In the first case you have made no connection between astrology and behaviour, only that people will behave in a certain way if they believe it is astrology when it is not, which is a different point.

However, let us for the sake of argument assume that the advice given was astrological and consider the first problem with the methodology mentioned above. It is clear, reading the advice given, that one might decide to act on this advice, even if one did not believe in the efficacy of astrology, because it seems like good advice. Indeed, perhaps the neutral advice should be put on all our fridges to remind ourselves not to take our relationships for granted. If we are acting on advice because we believe it is good advice, and not because of the astrological content, then there is no direct connection between astrology and a change of behaviour. The person changing his behaviour is not making an astrological decision; he/she is making a decision based on other factors. If, on a holiday in Oman, I read a Mullah's column in the local paper which says I should not drink alcohol, I am not necessarily basing my decision to give up alcohol, on Islam, or making my decision, because I believe in Islam. I may be unaware that Islam forbids alcohol, and decide to give up because not drinking alcohol makes me feel better.

In the relationship questionnaire, four of the questions out of twelve are as follows:

“Are you happy with the amount of effort that your partner puts into the relationship?”

“Has infidelity ever caused problems in your relationship?”

“Does money cause problems in your relationship?”

“How satisfied are you with your sex life?”¹⁵

Let us now consider our second problem and suppose that one of the participants decides in the second questionnaire that money is now a problem in her relationship. If she is a positive Pisces, then Blackmore and Seebold want to conclude, that this is evidence of a change of behaviour, because of the astrological advice which she has received. This is an extraordinary position to take, as there seems no way that the positive Pisces advice could have any influence on money matters. If you and your partner lose your jobs between answering the two relationship questionnaires, the resulting financial problems that you face have nothing to do with the astrological advice that you have received.

Let us now consider the third problem: even if you can connect the change in relationship to a change in behaviour, you can never be sure that the change of behaviour is the result of the astrological advice received. It could be due to any number of non-astrological reasons taking place in one's life, or one's partner's life. There is no way of knowing. You have A (astrological advice) followed by B (change of behaviour), but you cannot conclude that A causes B, because B could be caused by any number of matters. Even when A could cause B, as the positive advice for Pisces might improve one's sex life, you cannot legitimately draw the conclusion that it does. My friend at work tells me it will be very good for my career if I am seen to work closely with the Sales department, and then I'm seen working very closely with them. You cannot conclude that I am acting on his advice. I may be working closely with them because I am attracted by one of the women in the Sales team and care nothing for my prospects in the company, because I have already accepted a job elsewhere.

Blackmore and Seebold appear to have given no thought to the decision process which goes into behaviour. If a sun in Aries person reads in an astrology column that kick-boxing is a good exercise for Aries people, and that person actually does take up kick-boxing, his/her reason for doing so will not be only astrological. A whole host of other factors will come into the decision, the most important of which will be that they actually want, or think they ought, to take some exercise. Blackmore and Seebold appear to assume that the only change in the participants' lives between the two relationship questionnaires is the astrological advice that they receive, and that everything else remains the same. Obviously, this is wrong; we do not live our lives that way. We are bombarded with influences all day long and make decisions for a variety of reasons. The sort of relationship questionnaire that Blackmore and Seebold use is not going to begin to deal with these issues. This part of their experiment does not deserve to be repeated.

The Awareness of Astrology Questionnaire

Blackmore and Seebold's 'Awareness of Astrology questionnaire' was developed for this study. It produces results which indicate high levels of astrological awareness and belief in its efficacy. 72% think it is not just superstition, while 15% say they would alter their behaviour due "to material read in horoscope",¹⁶ a percentage which is far higher than the percentage found in the studies cited by Blackmore and Seebold. However, the participants in the Blackmore and Seebold experiment were young, female undergraduate students, studying psychology, humanities, and nursing, and it seems likely that the high degree of astrological awareness was a particular characteristic of this group. Therefore, I thought that it would be interesting to give a similar test to a completely different group of people. My questionnaires were sent to the employees of a small service company based in Teesside, but with outlets in Hartlepool and Spennymore to the North, and York and Leeds to the South. The questionnaires were sent out, with the company newsletter, to 78 employees, and eight shareholders. In order to encourage responses, a prize draw was promised for all completed entries, offering £30 of Marks and Spencers vouchers for the first drawn, £20 for the second drawn, and £10 for the third drawn. Some effort was made to encourage the employees to respond, but no effort was made to encourage shareholders to respond. In the end four shareholders responded, and 60 employees. Two of the employees were graduates, and two of the shareholders had trained as nurses, but none of the other employees had entered higher education. 12 of the respondents were men and 48 women. The average age of the women was 45, ranging from 22 to 78; the average age of the men was 40, ranging from 24 to 59. Seebold describes her participants as coming from all economic backgrounds but defines them as middle class, because they were attending university. The majority of my participants would be described as low income working class.

I wanted to keep my questionnaire similar to the Blackmore and Seebold questionnaire so that a comparison could be made, but I did not always consider the Blackmore and Seebold questions appropriate, so I chose to make a number of changes. Below I detail the questions in the Blackmore and Seebold questionnaire (B+S), and the questions in my questionnaire (MY), with the reasons for the changes that I have made:

Time of birth	B+S MY	Time of birth Time of birth Don't know
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Blackmore and Seebold ask for the time of birth, but many people do not know when they were born. They do not tell us how many of the participants knew their time of birth.

1	B+S	Do you know your star (sun) sign?	Yes/No
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	MY	Do you know your star (sun) sign?	Yes/No/Don't know what a Sun sign is
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When I tested my questionnaire it was apparent that, although virtually everyone knows that their zodiac sign, they did not know it was called a sun sign. For an astrological awareness test, I thought it appropriate to determine how many people did not know.

2	B+S	Do you know your moon sign?	Yes/No
	MY	Do you know your moon sign?	Yes/No/Don't know what a Moon sign is

To assume that people do know what a moon sign is assumes a level of astrological awareness which is not warranted. As will be seen below, many people do not know what is meant by a moon sign.

3	B+S MY	Do you regularly read your horoscope in magazines and newspapers?	Yes/No
4	B+S MY	Do you value the advice given by the astrologer?	Yes/No
5	B+S MY	Has an astrologer ever compiled a personal horoscope for you?	Yes/No

I made no changes to any of these questions.

6	B+S	Do you think your star sign accurately reflects your personality?	Yes/No
	MY	Do you think your star sign accurately reflects your personality?	Yes/No/Don't know

Given that respondents have the option to answer No to question 1, one must give them the option of "Don't know" to this question. In my test one lady did not know what her sun sign was, so it would have been impossible for her to know whether her sun sign accurately reflects her personality. In addition, the whole question of whether one can know one's personality is a vexed one, so it would be possible to answer "Don't know" even if you are aware of what your sun sign means.

7	B+S	Would you consult an astrologer before getting married or settling down with a partner?	Yes/No
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	MY	Would you consult an astrologer before any important decision in your life?	Yes/No/ Possibly/ Don't know
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My participants are considerably older than the Blackmore and Seebold participants, and approximately three quarters are married, divorced or widowed. Therefore I considered it was inappropriate to ask whether they would consult an astrologer before getting married or settling down. It would have been more appropriate to ask whether they did consult an astrologer before getting married, but as the answer would almost certainly be no, it was of little interest. Therefore, I asked a more general question. I included "possibly" and "Don't know", because I thought the emphasis would be on the no answer, and I wanted to determine how many participants might consult an astrologer in certain circumstances, and how many were prepared to keep an open mind. No one answered "Yes" to this question.

8	B+S MY	Have you ever read a teach yourself astrology book or taken an astrology course?	Yes/No
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I made no change to this question.

9	B+S	Do you think astrology is just superstition?	Yes/No
	MY	Do you think astrology is just superstition	Yes/No/ Don't know

I considered it likely that many people would decide, on reflection, that they really did not know what astrology was about, and therefore I thought they should have an option to say that they did not know.

10	B+S	Would you alter your behaviour due to material that you read in your horoscope?	Yes/No
	MY(A)	Would you alter your behaviour due to astrological advice that you read in magazines and newspapers?	Always/ Sometimes/ Possibly/Never
	MY(B)	Would you alter your behaviour due to any astrological advice that you receive?	Always/ Sometimes/ Possibly/Never

I added the second question because Blackmore and Seebold are unclear on whether they mean astrology columns in newspapers, or personal horoscopes,

both of which are referred to in previous questions. They are not the same, so I decided to include both. I gave a variety of options, because those who might under certain circumstances alter their behaviour could be unclear on whether they should give a Yes or No answer.

11	B+S	Do you find out the star signs of people that you have relationships with?	Yes/No
	MY	Do you find out the star signs of people that you know well?	Yes/No

With so many of my participants already married, I considered this an inappropriate question to ask and decided on the more general question.

12	B+S	Have you ever read a book concerning your star sign in love, or the year ahead for your star sign?	Yes/No
	MY	Have you ever read a book concerning your star sign in love, or a book on the year ahead for your star sign?	Yes/No

I wanted it to be clear that the year ahead should be read in a book, and not a magazine.

13	B+S	How much do you believe in astrology?	A sliding scale is offered.
	MY	How much do you believe in astrology?	A lot/A little/ Not at all/Don't know

Blackmore and Seebold use a sliding scale in their relationship test, but as I did not have a relationship test I wanted to avoid the use of a sliding scale.

The Results of my Questionnaire

	Question	Answer	Male	Female	Total
	Time of birth	Time given Don't know	6 10	17 31	23 41
1	Do you know your star (sun) sign?	Yes No Don't know	16 0 0	43 1 4	59 1 4
2	Do you know your moon sign?	Yes No Don't know	1 11 4	4 28 16	5 39 20
3	Do you regularly read your horoscope in magazines and newspapers?	Yes No	3 13	23 25	26 38
4	Do you value the astrological advice given in those magazines and newspapers?	Yes No	0 16	11 35	11 51
5	Has an astrologer ever compiled a personal horoscope for you?	Yes No	2 14	5 43	7 57
6	Do you think that your star sign description reflects your personality?	Yes No Don't know	8 5 2	22 8 15	30 13 19
7	Would you consult an astrologer before any important decision in your life?	Yes No Possibly Don't know	0 13 3 0	0 35 8 5	0 48 11 5
8	Have you ever read a teach yourself astrology book or taken an astrology course?	Yes No	1 15	3 45	4 60
9	Do you think astrology is just superstition?	Yes No Don't know	11 2 3	17 19 12	28 21 15
10	Would you alter your behaviour due to astrological advice that you read in magazines and newspapers?	Always Sometimes Possibly Never	0 0 3 13	0 6 7 34	0 6 10 47
11	Would you alter your behaviour due to any astrological advice that you receive?	Always Sometimes Possibly Never	0 0 5 11	0 2 18 28	0 2 23 39
1	Do you find out the star signs	Yes	3	18	21

2	of people that you know well?	No	13	31	43
1	Have you ever read a book concerning your star sign in love, or a book on the year ahead for your star sign?	Yes	3	13	16
3		No	13	34	47
1	How much do you believe in astrology?	A lot	0	8	8
4		A little	4	19	23
		Not at all	11	17	28
		Don't know	1	3	4

A Comparison Between the Two Awareness of Astrology Questionnaires

According to Blackmore and Seebold:

More generally, the questionnaire results confirm the strong influence of astrology on women's lives. 72% do not think astrology is just superstition and almost 90% said that they find out the sun signs of people they have relationships with. 78% had read a book concerning their sun sign in love. Even though only 15% said they would alter their behaviour according to what they read in a horoscope, these results suggest that astrology may influence women's behaviour in many ways.¹⁷

We have already discussed how Blackmore and Seebold are not entitled to claim that the results of their awareness of astrology questionnaire support the notion that reading horoscopes influences behaviour. However, the participants in their questionnaire do show a high degree of astrological knowledge. We must now answer two questions: firstly, if Blackmore and Seebold are not entitled to claim that horoscopes influence behaviour are they at least entitled to use the results of their astrological awareness test to claim "the strong influence of astrology on women's lives"; and secondly, whether their results are confirmed by the responses to my questionnaire.

The answer to the first question is clearly no. Blackmore and Seebold are not entitled to draw general conclusions on the importance of astrology in women's lives, because their participants are not a good representative sample of women in general, or women living in the United Kingdom.

Indeed, they may not be a good representation of full time undergraduate women studying at The University of the West of England. Initially, 61 women started the first test, and 46 ended up completing the two relationship tests, and the astrological awareness test. I do not know how many full time undergraduates there were at The University of the West of England, but it is likely that those who took part in the test were more interested in astrology than those who did not take part in the test, and that those who completed all three question-

naires were more interested in astrology than those who did not complete the test. This is supported by my own experience. I sent my questionnaire to 78 employees, 24 men and 54 women. Initially, I received 11 responses from men and 45 from women; about 46% of the men and 83% of the women. On all the questions the men were more sceptical and less interested in astrology than the women. This would suggest that a lack of interest is one factor in explaining why the men were more reluctant to return their questionnaires. After the initial response, some more pushing for additional completed questionnaires resulted in four more men responding. All four men were sceptical on virtually every question, and they believed in astrology "not at all". It is likely that any questionnaire which relies on the participants returning the questionnaire forms will be biased and will only tell what the participants who respond are thinking.

In the table below, for the questions which remain exactly the same, I compare the responses received from the women participating in my questionnaire with those participating in the Blackmore and Seebold questionnaire:

Question number	Question	B+S % said Yes	MY female % said Yes
3	Regularly reads horoscopes in newspapers and magazines	70	48
4	Values advice given by astrologer	39	24
5	Astrologer has compiled personal horoscope for her	15	11
8	Has read teach yourself astrology book/taken astrology course	24	5
12	Has read book about star sign in love or year ahead for star sign	78	28

On all questions my participants show a greater level of scepticism in astrology, and a lower level of astrological awareness. The closest is question 5, where my participants are about 73% as aware as the Blackmore and Seebold participants. It is likely that my participants, in general, read fewer books than the Blackmore and Seebold participants, which might explain the low figures for questions 8 and 12. We should note that the response to question 12 forms part of the quotation from Blackmore and Seebold at the start of this section. Clearly, for these questions, the results of my questionnaire do not confirm the results of the Blackmore and Seebold questionnaire. Only for question 5 do my results come close to confirming the Blackmore and Seebold results, and it is for question 5 that the Blackmore and Seebold participants show the least interest in, and awareness of, astrology.

The first table below compares questions 1, 2, 6, and 7. Questions 9, 10, and 11 are dealt with separately in the second table below, because the responses to

these questions form part of the quotation from Blackmore and Seebold above. My question 14 cannot be compared, because Blackmore and Seebold use a sliding scale for their equivalent question, and give us no details of the results.

Question number	Question	B+S % saying Yes	MY female % saying
1	Knows her star (sun) sign	100	Yes: 90 No: 2 Don't know:8
2	Knows her moon sign	22	Yes: 8 No: 58 Don't know:33
6	Thinks sign description accurately reflects personality	85	Yes: 51 No: 17 Don't know:32
7	BY: Would consult an astrologer before getting married/settling down MY: Would consult an astrologer before important decision in life	13	Yes: 0 No: 73 Possibly: 17 Don't know:10

If we assume, and I consider it a reasonable assumption, that those who answered "Don't know what a sun sign is" on my questionnaire do know their zodiacal sign, then the Blackwood and Seebold findings for this question are confirmed. For questions 2 and 6, they are only confirmed if the majority of the "don't knows" would have responded "Yes" if I had given them only a "Yes/No" option. For question 2, "Do you know your Moon sign", this seems highly unlikely. Of the 15 people who answered "Don't know" to question 6, four expressed "a little" belief in astrology, (including the lady who did not know her sun sign), and 10 said they believed in astrology "not at all". Therefore, I think it is reasonable to assume that had they been forced to give a "Yes/No" answer, the majority would have said "No", and consequently my questionnaire cannot be used to confirm the Blackwood and Seebold findings. It is difficult to compare question 7. If the participants giving a "Yes" answer in the Blackwood and Seebold questionnaire actually mean "Yes", then my questionnaire does not confirm their findings, as none of my participants said "Yes". If the participants in the Blackwood and Seebold questionnaire actually meant "perhaps", then my questionnaire would confirm their findings. However, I do not think it is correct to equate "would" with "perhaps".

Question	Question	B+S % said	MY female
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number		Yes	% said
9	Thinks astrology is not just superstition	72	Yes: 40 No: 35 Don't know: 25
10	BS: Would alter behaviour to material read in horoscope MY(A): Would alter behaviour to material read in sun sign column MY(B): Would alter behaviour due to any astrological advice received	15	Always: 0 Sometimes: 13 Possibly: 15 Never: 72 Always: 0 Sometimes: 13 Possibly: 15 Never: 72
11	B+S: Finds out star signs of people she has relationships with MY: Finds out star signs of people you know well	89	Yes: 36 No: 64

My findings for question 11 do not appear to support the Blackmore and Seebold findings. However, this is probably because we asked different questions. If 90% or more of the population know their sun sign, it is likely that you will learn the sun sign of someone you are intimate with, whether you are interested in astrology or not. When the relationship is not intimate, you are less likely to learn what someone's sun sign is, unless you are interested in astrology, in which case you might ask them. Therefore, that 36% of my participants said "Yes", compared to 89% of the Blackmore and Seebold participants, is not surprising. I would put knowing the sun sign of someone you have a relationship with on a similar level to knowing your own sun sign and therefore do not think that the claims Blackmore and Seebold make for this result are warranted.

Only 40% of my participants are sure that astrology is not just superstition, but 25% of my participants did not know what to think, so 65% were not prepared to say that astrology was just superstition. Of the 12 people who answered "don't know" to this question, seven said they believed in astrology "a little", three "not at all", one did not answer the question, and another answered "don't know". If I exclude the three who believe in astrology "not at all", I can say that 58% are not prepared to say astrology is just superstition. Compared to this Blackmore and Seebold found 72% who thought astrology was not just superstition. My figure does not confirm the Blackmore and Seebold figure.

One problem with this question is that it may tell us very little about the importance of astrology in people's lives. The original question in the Blackmore and Seebold questionnaire was, "Do you think astrology is just superstition? Yes/No". If you think there might be something in astrology, but you do not really know, "it seems to work, sometimes, but most of it must be nonsense", then you are obliged to answer this question with a "No" answer. If you are then going to say, "72% don't think astrology is just superstition" that is correct, but it is not the same as saying that 72% think there is no superstition in astrology. Blackmore and Seebold use this 72% to support their view that astrology is important in people's lives, but many of those 72% may have said astrology is not just superstition as a result of not having thought about it very deeply, because it is not important in their lives.

I asked two questions which relate to question 10 in the Blackwood and Seebold questionnaire. With my second question, there is a reduction in the number of "sometimes" which one would not expect, but an increase in the number of participants answering "possibly", which one would expect. It is possible that the number of participants answering "sometimes" fell in the second question, because the astrology that people are familiar with is the astrology from magazines and newspapers. The participants would know whether they have, in the past, changed their behaviour as a result of reading sun sign columns and would have a good idea if, on occasion, they might change it in the future. However, other astrological advice, which remains unspecified, may be a possibility only because the participants do not know what it would entail. Again, it is difficult to compare my results to the Blackmore and Seebold results without knowing whether their participants are answering a question on sun sign columns or on an individual horoscope prepared by an astrologer. It is also necessary to decide what their participants mean by "would alter" behaviour. If their participants are referring to sun sign columns, then their "would alter", at the very least, means that behaviour is "sometimes" altered, so that I could argue the Blackmore and Seebold results support my findings, that 13% of participants will sometimes change their behaviour in accordance with what they read in a sun sign column. I consider this a high figure and would like my findings to have support, but, unfortunately, the Blackmore and Seebold question is too ambiguous for me to draw this support with any confidence.

We can conclude that there is only one area in which my results and the Blackmore and Seebold findings support each other: they both find that virtually everyone knows their sun sign. Possibly their results support my finding that 13% of women (in my questionnaire) will sometimes change their behaviour in accordance with what they read in sun sign columns. For all other questions, the Blackmore and Seebold results show much greater awareness of astrology, interest in astrology, and knowledge of it, than my results. However, my results do show astrological awareness, and whether we can draw any conclusions from them is the subject of the next section.

Conclusions and Implications

The most obvious conclusion we can draw from my questionnaire is that men are more sceptical of, and in general have less interest in, astrology than women. On every question they show less interest. The sample size is small, but this is the experience of many astrologers who are engaged with the public in their astrological work.

I have separated the other questions into five groups: 1. time of birth; 2. astrological knowledge; 3. interest in astrology; 4. value found in astrology; 5. belief in astrology. There is some overlap, but I attempt to deal with each heading separately, except for value and belief, which I consider together.

1. Time of birth

23 participants (36%) knew their time of birth, and 41 (64%) did not. Of the 7 participants who were born outside England, 4 knew their time of birth. Of those who believe in astrology "a little" or "a lot", 36% knew their time of birth. If this is the case for the whole of England, where the time of birth is not put on a birth certificate, then given that most astrologers believe that an accurate time of birth is required in order to provide accurate advice, the astrological community has a serious difficulty if it wants to spread the astrological word. To increase the popularity of and interest in astrology, it may be necessary to use an alternative to the birth chart when giving astrological advice.

2. Questions concerning astrological knowledge

- a) Do you know your star (sun) sign?
- b) Do you know your moon sign?
- c) Do you think that your star sign description accurately reflects your personality?
- d) Have you ever read a teach yourself astrology book or taken an astrology course?

With 92% knowing their sun sign, 6% not knowing what a sun sign is, and only 2% not knowing their moon sign, the implication is that the vast majority of people know something about astrology, even if it is only what their sun sign is. To this extent, astrology seems to have permeated the consciousness of the nation. With 68% of those responding sufficiently confident to say that their sun sign does, or does not, describe their personality, the implication is that a majority know enough about astrology to know what their sun sign is meant to mean. However, with only 8% of participants knowing their moon sign, and only 6% having read an astrology book, we can say that this questionnaire suggests this knowledge does not go very deep.

3. Questions concerning interest in astrology

- a) Do you regularly read your horoscope in magazines and newspapers?

- b) Has an astrologer ever compiled a personal horoscope for you?
- c) Have you ever read a teach yourself astrology book or taken an astrology course?
- d) Do you find out the star signs of people that you know well?
- e) Have you ever read a book concerning your star sign in love, or a book on the year ahead for your star sign?

41% are sufficiently interested in astrology to read their horoscopes regularly in the newspapers; 33% are sufficiently interested to find out the sun sign of those they know well; 25% have read an astrology book on the year ahead or on their star sign in love; 11% have obtained a personal horoscope; 6% have been sufficiently interested to read a book on astrology or attend a course. This suggests that a substantial minority are interested in astrology. The more effort required pursuing this interest, the less interested they become, which is what one might expect. That 25% have read an astrology book on their star sign in love, or on the year ahead, seems a high figure.

4. and 5. Questions concerning the value and belief in astrology

Value (efficacy):

- a) Do you value the astrological advice given in those magazines and newspapers?
- b) Would you consult an astrologer before any important decision in your life?
- c) Would you alter your behaviour due to astrological advice that you read in magazines and newspapers?
- d) Would you alter your behaviour due to any astrological advice that you receive?
- e) Do you think your star sign description accurately reflects your personality?

Belief

- a) Do you think your star sign description accurately reflects your personality?¹⁸
- b) Do you think that astrology is just superstition?
- c) How much do you believe in astrology?

47% believe that their star sign description accurately reflects their personality (belief/value), but no one would definitely consult an astrologer before a major decision in their life (value). 17% would possibly consult an astrologer (value). If you believe astrology gives an accurate reading of your personality, why would you not value it enough to approach an astrologer prior a major decision in your life? One reason might be a lack of knowledge of what astrologers do. It could also be that, to the extent that people do know what astrologers actually

do, they think they will receive a psychological profile, which may be of little interest for an important decision like marriage or a new job. It would, perhaps, have been more informative if I had phrased the question along the lines of, "Would you consult an astrologer if you had a major crisis in your life?" Sorting out a crisis is what psychological astrologers try to do. However, I was trying to keep the question similar to the Blackmore and Seebold question.

33% are quite definite that there is something in astrology, that it cannot be dismissed as superstition (belief), while 39% hold open the possibility of changing their behaviour as a result of astrology (value). The correlation between the two is quite strong: 81% of those who did not believe that astrology was just superstition were open to the possibility of changing their behaviour as a result of astrological advice received. The implication is that if astrologers could show how they can be of value in people's lives, then there is potential interest. We cannot be sure how many people have changed their lives because of astrological advice received, but we can assume that it will not be more than the 9% who say that they would sometimes change their lives because of astrological advice received, which is only 23% of those who are open to the possibility of changing their behaviour.

12% believe in astrology a lot, and 35% believe in it a little. From these figures, if we remove the two people who believed in astrology "a little" but thought it was "just superstition", but include the others, we are left with 45% who have some belief in astrology. Of these participants, 38% value the sun sign columns that they read, while none of our participants said they would consult an astrologer before an important decision in their lives. What this implies is that 62% of those who say that they believe in astrology, at least a little, and do not think it is only superstition, find nothing of value in what astrology has to offer. The astrology of everyday life – sun sign columns – is of value to only 38% of those who claim some belief in astrology.

As a final thought, I decided to determine if there was any correlation between those who believe in astrology a lot (belief), those who know their moon sign (have knowledge of it), and those who have read a teach yourself astrology book (have interest in it), and those who would sometimes change their behaviour because of it (value it). The results are in the table below:

Participant	Belief in astrology	Knows their moon sign	Have read a book/ Done a course	Would sometimes change behaviour, either when reading horoscopes, and/or any other astrological advice
1	A lot	Don't know what a Moon sign is	Yes	Sometimes
2	A lot	No	No	Possibly
3	A lot	No	No	Sometimes

4	A lot	No	No	Sometimes
5	A lot	No	Yes	Possibly
6	A lot	Yes	No (has read tarot cards)	Sometimes
7	A little	Yes	No	Possibly
8	A little	No	No	Sometimes
9	A lot	Yes	Yes	Sometimes
10	A lot	Yes	No	Possibly
11	A little	No	Yes	Possibly
12	A little	Yes	No	Possibly

As we might expect, there does seem to be a correlation between those who believe in astrology “a lot” and those who are more interested in it, have knowledge in it, and value it.

Conclusions

I have argued that the methodology Blackmore and Seebold use in their “The Effect of Horoscopes on Women’s Relationships” is flawed, that their relationship test should not be repeated, and that their astrological awareness test cannot be used to support the view that astrology is important in women’s lives. My own astrological awareness test generally indicates less astrological knowledge and interest than the Blackmore and Seebold test. It confirms only one of their results: that the vast majority of people know their sun sign. However, the Blackmore and Seebold test may confirm my own finding that 13% of women will sometimes change their behaviour as a result of what they read in sun sign columns. Of all my results, this, and that 25% of my participants have read a book concerning the year ahead or their sun sign in love, are the two I find most significant. I think it is of interest to consider why more of my participants say they will “sometimes” change their behaviour as a result of what they read in sun sign columns, than because of any other astrological advice received. It would be interesting to know whether this result is confirmed by other tests. There are two other implications I draw from my questionnaire. Firstly, if it is true that only 36% of those living in England know their time of birth, then astrologers, who believe the time of birth is important in giving astrological advice, have a problem that should be addressed. And secondly, that almost half of the participants in my test have some belief in astrology, and some belief in its efficacy; but of this sizeable minority, only around one third have found anything of value in astrology. It would be interesting if future studies could determine why.

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Endnotes

- 1 *Correlation*, Volume 19(2), 2001, pp.14-28.
- 2 They cite Gallup and Newport, (1991); and Bauer and Durant, (1997).
- 3 *Correlation*, Volume 19(2), 2001, pp.14.
- 4 *Ibid*, pp.14.
- 5 They cite Gorer (1947), who found that 5% said they followed advice in astrology columns, 18% occasionally so, and 77% never did; and Miller (1983) who found that fewer than 2% of college graduates changed their behaviour because of astrology columns.
- 6 *Correlation*, Volume 19(2), 2001, pp.16.
- 7 Seebold's comments in *Correlation*, Volume 20(2), 2002, pp.62.
- 8 *Correlation*, Volume 19(2), 2001, pp.20.
- 9 *Ibid*, Volume 19(2), 2001, pp.20.
- 10 *Op cit*. pp.20.
- 11 *Correlation*, Volume 20(2), 2002, pp.58.
- 12 *Ibid*, pp.59.
- 13 *Correlation*, Volume 19(2), 2001, pp.28.
- 14 *Ibid*, pp.18.
- 15 *Op cit*. pp.26-27
- 16 *Op cit*. pp.19.
- 17 *Op cit*. pp.20.
- 18 I have included this question under belief as well as value because there may be no way of knowing if a star sign description reflects a personality, in which case it becomes belief in, rather than value from, astrology.

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