

How the Moon Affects You by Arnold L. Lieber and Jerome Agel. Revised and updated edition. New York: Hastings House, 1996. 190 pp. \$14.95 (paper). ISBN 0-8038-9378-7.

The Lunar Effect by Arnold L. Lieber and Jerome Agel. UK edition. London: Corgi Books, 1979. 174 pp. £0.85p (paper).

Does the Moon affect us biologically or psychologically? Collectively or individually? I don't know for certain. What I do know is that many of us think it does, and there's a fair bit of empirical evidence to suggest it does, too. Indeed, for millennia, the human race has looked to the Moon to account for all sorts of vagaries in animal and human behaviour, and, on occasion, as with werewolves, an unlikely combination of both.

Dr. Arnold Lieber M.D., past Chairman, Department of Psychiatry, Miami Heart Institute, Florida, also looked to the Moon for an explanation, many years ago, when he elected to specialise in psychiatry. As a medical student, he'd noticed recurring periods of disturbance amongst patients on psychiatric wards. This led him to ask himself what was causing this. When he started to specialise, he noticed exactly the same pattern of behaviour, but this time the ancillary staff suggested a surprising answer to his question. The Moon, they told him, was the cause of such disturbances. Or more precisely, its phases were.

Other professionals insisted that the Moon caused other medical, and non-medical, phenomena and Dr. Lieber was hooked. Accordingly, and despite the problems it could have caused professionally, he elected to make a formal study of the possible effects of the Moon, and its phases, on us. A result was his 1978 book, *The Lunar Effect*, a watershed in popularising the view that the Moon can indeed affect us in a number of ways.

When, in the late 1970s, I was writing a book about how we might give an acceptable scientific face to traditional astrology,¹ I read *The Lunar Effect*—of which *How the Moon Affects You* is a revised and updated version. The book impressed me enormously, as it still does, with its seemingly overwhelming evidence that such an effect exists. However, when I started to read the relevant scientific literature, I became more cautious and a great deal less certain.

When one study reported that the Moon did something to us, there was usually another stating that it didn't, or that it simply appeared to because of methodological or statistical anomalies. Examples of recent papers at loggerheads in this respect concern the incidence of dogs biting at the time of the full Moon.²

The truth of the matter, it seemed, was going to be difficult to tease out, compelling as the evidence appeared to be from Dr. Lieber's book.

There are many problems facing investigators trying to establish the existence of a lunar affect on humans. The complexity of solar cycles, for example, can cause confusion in this respect, and many other, often diffuse, factors

have to be taken into account, which include prior expectation on behalf of observer and observed; the possible preference for acting-out of specific behaviour(s) at certain phases of the Moon; and, most difficult of all, perhaps: defining and carrying out a well-designed study, with appropriate statistical analyses of lunar movements and their possible links to events on Earth. Despite such problems, empirical studies into putative lunar effects continue to proliferate. So what's the truth? And how close does *How the Moon Affects You* take us to it?

There are a number of long-reported links between lunar cycles and animal behaviour; perhaps the best known being those reported by the late Dr. Frank Brown of Northwestern University in Evanston, Illinois.³ These and a number of other classic studies are cited in Dr. Lieber's book, as are some interesting possibilities vis-à-vis the mechanism of putative biological lunar actions, some of which, such as the possible existence of some sort of "gravoreceptors," are undoubtedly worthy of ongoing experiment and consideration.

It's a long way from such findings and speculations to our explaining belief in astrology, however, or attempting to account for, or replace, this with a "biological tides" theory. This and related comments in the book concerning the studies of both Jung and Michel and Francoise Gauquelin into astrology are dated, *as they stand*. In addition, none of the experimental evidence for apparent effects of the Moon that almost certainly defy scientific explanation is given, despite the fact that there's plenty of it in the published literature, albeit of varying standards, as indicated below.

To the critical and informed thinker, *How the Moon Affects You* appears unnecessarily superficial at times, too. Thus purely anecdotal evidence is often used to infer more general effects, and just because a congressman's secretary says she received "just the usual crazy stuff" by way of phone calls during the full Moon, and a psychiatrist claims such callers have a "tendency to rudeness," means little; especially when there are corresponding studies in the mainstream literature congruent with such views—together, of course, with those that aren't. Some such studies look at a variety of aspects of lunar phase and telephone calls, and are worthy of serious consideration in their own right.⁴

Some of the language in the book can be off-putting to the technically minded, too. Thus stating that "all hell broke loose" when the Moon was close to the Earth might not per se convince the more discerning amongst *JSE* readership, and it might cause others, less critical, to look for dramatic and readily demonstrable effects of the Moon, which, if they exist at all, are most probably subtle, and a great deal less evident than some unexpected, mass exodus from Hell.

Some of the historical statements made are also ambiguous. Galileo's "wholesale rejection of astrology," for example, wasn't quite as clear-cut as it seems.⁵ It would also have been apposite to mention Nicolas Copernicus as a "cofounder" of modern astronomy along with the duly mentioned Brahe and Kepler. Further, citing a belief in lunar effects by well-known historical fig-

ures, such as Francis Bacon, tells us simply that they accepted what was generally believed in their day. A day prior to the era of the scientific method: the ballpark we're obliged to play in today.

It's worth mentioning in this context that Bacon's views on what he thought to be astrology included those that stated it applied to "masses . . . rather than individuals," and that "there is no fatal necessity in the stars; but that they rather incline than compel."⁶ Cosmobiologists with a blinkered view of traditional astrology, please note!

The aspects of *How the Moon Affects You* that deal with how our geophysical environment in general, and our electromagnetic environment in particular, might be affected by the Moon omit any mention of the most likely physical mechanism for this. For it is now posited that such effects are possibly due to ambient radiations interacting with magnetite: a ferro magnetic mineral commonly found in living tissue, including our own.⁷

All that said, in the chapter entitled "New Research," the authors do address some of the more voluble critics and criticisms of their ideas, and they suggest—with probable good reason—that some of the less liberally minded in scientific circles would prefer to think a lunar effect nonexistent whatever the objective truth of the matter.

The book has a fairly comprehensive and reasonably balanced bibliography that enables those of us who wish to read further. That said, there have been a number of papers published on lunar effects of various types since the date of publication, and even a brief search produces dozens of these, of all standards, varying from the relationship of the lunar cycle to seclusion, to the Moon's possible role in determining the number of babies born.

As a result of publication dates, one major source of references is inevitably missing: *Cosmic Influences on Humans and Animals and Plants: An Annotated Bibliography*.⁸ This is a work of great and varied interest to any serious researcher in this area, and although it was published a year after *How the Moon Affects You* was issued, virtually all the material in it was available prior to publication of the latter book. It's therefore unfortunate that much of this material went uncited, including that on Jung's erratic studies on astrology and synchronicity.

It should be constantly borne in mind by the *JSE* readership that *How the Moon Affects You* is intended for a popular readership; hence its content is to some degree selective, and it's slickly written and presented accordingly. Virtually all of the areas looked at, including putative lunar associations with such factors as time of marriage, aggression, mental illness, and most others, have their corresponding accounts—whether lunar or frankly astrological—in the mainstream literature where the *JSE* readership might prefer to assess them.^{9–11}

For, as indicated, while to the casual reader the evidence for a lunar effect can appear overwhelming from an account such as this, it remains an area of heated debate and controversy, albeit the fact it does so speaks volumes about our ongoing preoccupation with our closest satellite, and the emotions it continues to influence, one way or another.

I recently studied the relevant literature comprehensively, and my own view is that the Moon almost certainly does affect some of us, probably through some action on the pineal gland.¹² The book doesn't address much relevant work in this respect either, though, given its format and the fact that it's a few years out of date, we can't reasonably expect it to.

What perhaps put Dr. Lieber's efforts into their best perspective, for me at any rate, was the fact that when I recently decided to update my own book on such matters, my first port of call for background reading was my original, well-thumbed copy of *The Lunar Effect*.

All told, *How the Moon Affects You* won't fully inform the discerning reader as to all the whys and wherefores of lunar research. However, as a general account of the sorts of effects claimed for the Moon, of the sorts of ideas prevalent in this area, and as a highly readable and entertaining portrayal of many of the social and cultural facets of lunar lore, it has no equal, in my view, and can be recommended, accordingly, without any hesitation whatsoever.

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Getting Rid of Ritalin: How Neurofeedback Can Successfully Treat Attention Deficit Disorder Without Drugs by Robert W. Hill and Eduardo Castro. Charlottesville, Virginia: Hampton Roads Publishing, 2002. 304 pp. \$19.95 (paper). ISBN 1-57174-254-9.

Attention-deficit/hyperactivity disorder (ADHD) is a common disorder affecting 3–5% of school-age children. It involves three problem areas: inattention, hyperactivity, and impulsivity. To meet diagnostic criteria, these need to be present in more than one setting and before age 7. Some symptoms, particularly those involving hyperactivity, may improve with aging, but a significant number of adults demonstrate impairment as well. While the exact cause of ADHD is unknown, research has focused on neurophysiological deficits.

The mainstay in treating ADHD has been stimulant medications such as Ritalin (methylphenidate). These medications have been used for over 40 years, and more than 160 randomized, controlled studies have been published supporting their use. At least 70% of ADHD patients will respond to an initial stimulant trial, and 90% will respond if two stimulants are tried (Greenhill et al., 2002). Despite their impressive ability to decrease hyperactivity, they are not sedating and, as stimulants, are in fact quite the opposite. One disadvantage of Ritalin is that its short half-life requires dosing every 4 hours, so in recent years, longer acting agents such as Adderall (a mixed-salts amphetamine product) and longer acting forms of methylphenidate such as Concerta, with a 12-hour effect, and to a lesser extent Metadate CD, with an 8-hour effect, have largely replaced Ritalin.

These agents are excellent in treating ADHD, but they do not cure the disorder. They also do not build up in a patient's system, so they must be taken every day. Other concerns have been raised about them, including their tendency to decrease appetite, which could potentially affect patients' growth. In addition, even though the stimulants are not addictive when taken in anything close to therapeutic doses, they do have abuse potential and significant street value, so the dramatic increase over the past 20 years in the rate of stimulant prescriptions being written in the United States is of concern.

As with any medication, some patients are unable to tolerate the stimulants, so many families would welcome an effective alternative. In *Getting Rid of Ritalin: How Neurofeedback Can Successfully Treat Attention Deficit Disorder Without Drugs*, clinical psychologist Robert W. Hill, Ph.D., and psychia-