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Treatment of Compulsive Gamblers By Electrical Aversion

By C. P. SEAGER

Man has always been interested in predicting the outcome of various random events and at times has been prepared to risk his money, his wife and on occasions his life, on his ability to make the correct guess. There has been much speculation and concern about the effect of gambling on the national well-being, but there is little doubt that for the individual there is great satisfaction to be derived from making a correct prediction and winning something for nothing. Many charities and some governments benefit from this common desire.

In most instances the individual spends only his spare cash on such ventures, and recognizes that although his 'investment' is limited the possible prizes are great but the chances of success are extremely small. He may experience excitement and tension waiting for his horse to come home, but is safe in the knowledge that if he should lose there is little risk of suffering to himself or to his family. If he should be successful his win will be a bonus to achieve some special benefit which he would not otherwise be able to afford. It would be dangerous indeed for him to expect to furnish his house or feed his family on the outcome of his gamble.

In a few cases the gambling fever is such that the individual loses his sense of proportion and vastly overspends on his pursuits. He runs himself into debt, borrows from his friends and then loses that money also. He may spend money which had been put aside for food, for fuel bills or for rent, and eventually may steal or defraud to repay the more urgent demands but instead may use the money to satisfy what is now a pathological urge to gamble.

Freud (1928) dealt with the question of gambling in his psychoanalytic study of the Russian writer Dostoievsky. He quotes Dostoievsky as saying, 'the main thing is the play itself. I swear that the greed for money has nothing to do with it, although Heaven knows I am sorely in need of money'. He never rested until he lost everything, and for him gambling was a method of self-punishment. Freud suggested that since guilt and self-punishment satisfied him he would then become productive in his literary work. Freud equated gambling with vice which represented the ultimate vice of masturbation, and the passion for play was an equivalent of the old compulsion to masturbate. Once this pressure was relieved he was then able to concentrate on his literary ability. 'The irresistible nature of the temptation, the solemn resolutions which are nevertheless invariably broken, the stupefying pleasure and the bad conscience which tell the subject that he is ruining himself (committing suicide), all these elements remain unaltered in the process of substitution.'

Galdston (1961) describes gambling behaviour as the acting out of demands to a surrogate mother—Lady Luck—asking, 'do you love me?' It is the behaviour of a child to whom gifts may come by mere solicitation or teasing. This concept of regressive behaviour is also commented on by Lindner (1950) and Fink (1961). Harris (1964) reviewed some 20 reports in the psychoanalytic literature and concluded that most hypotheses were derivatives of Freud's basic formulation which linked gambling with masturbation. Bolen and Boyd (1968) provide a comprehensive review of the literature on the psychopathology of the gambler, but do not clearly differentiate between the heavy gambler who has not sought psychiatric treatment and the pathological gambler. In discussing the psychopathology of the normal gambler one must recognize that nearly two thirds of the adult population of the United States were reported as participating in gambling activity at some time during their lives. From the figures reported in Great Britain by the Churches'

Council on Gambling, there is no reason to think that the situation is very different in this country.

It must be recognized that in relation to his gambling the outlook of the gambler is indeed childlike and immature. There is a desire to achieve something for nothing, and a half-concealed belief that, while recognizing that the odds are against him, nevertheless with odds of, say ten thousand to one he expects to be the one individual who succeeds.

However, it is not necessarily correct to reduce all behaviour in which anxiety and doubt are generated and in which hope for success is incorporated to the basic motivation of sexual satisfaction. An alternative hypothesis is to consider the problem in terms of a learning situation. The gambler usually begins his betting at an early age in company with his peers. Most of these continue at the level of social gambling using only their spare money for this activity and deriving from the situation excitement, tension and an occasional financial windfall. We have to look at the pathological gambler to see what it is which allows him to progress from social gambling through heavy gambling to compulsive gambling where he is unable to resist the lure of the hope of gaining a release from the financial, social and domestic crises which his own gambling has induced. Is it simply that in a few cases the learning process has fallen by chance into a pattern which has encouraged the development of this situation? Kimble (1961) has summarized the effect of partial reinforcement on an operant conditioning procedure of which gambling activity is a good example. The gambler pays in his money, selects a winner and in a large number of cases he received a negative reinforcement; that is, he loses his money. In a small number of cases there is a positive reinforcement; he wins not only his original stake but also a variable, often large sum in addition.

While the actual pattern of losing and winning may be random for the majority of individuals, it is unlikely that it is simply this random pattern which will decide the fate of the few pathological gamblers. One must expect to find something within the individuals to make them vulnerable to this learning situation. The psychoanalytic studies already described mention various factors which have been found relevant in some individuals, but there is no evidence that there is any constant factor which would account for a particular response to the conditioning procedure. In general gambling may represent an act which is of an unconsciously forbidden nature and therefore activates guilt. Participation in the constant loss situation thereby acts as punishment and relieves the guilt. This handing over of sums of money, whether to enhance the coffers of the bookmaker, or of the Treasury, or even the finances of a charity, may indeed serve as a guilt-reducing activity for the population at large.

The problem of gambling has provided more scope for sociological than psychiatric investigation and interest. While large sums of money are spent in gambling, for the most part these are divided up amongst many millions of individuals and therefore do not provide a problem in the individual household. It is only in a small number of cases that the problem becomes sufficiently great to concern the immediate members of the family and then medical attention may be sought. As with many other problems of abnormal behaviour, doctors themselves are uncertain as to their role in dealing with these situations. They are used to the concepts of illness, and unless the abnormal behaviour can be demonstrated to arise from some pathological process they are apt to feel that it represents a weakness of will or even a frank liking for the abnormal behaviour.

Such a point of view was expressed in a leading article in the *British Medical Journal* (1968). The writer put forward the view that the gambler enjoys his excessive gambling because of the excitement that it provides and that he does not hurt himself as the compulsive patient does. Neither of these statements is correct, because by the time the individual has become a 'compulsive gambler' he has found that, although he may wish to stop and although he recognises the problems that he is causing both to himself and to those around him, he is quite unable to control his behaviour for more than a short period of time. Equally he is aware of the fact that his behaviour is causing

great hardship to his wife and children and is alienating his relatives and friends, but again he finds that he cannot desist from this behaviour which he can see is causing others so much pain and difficulty. The problem is perhaps similar to that of the sexual deviant, the exhibitionist or the transvestite who is ashamed, and even repelled, by his own behaviour, but nevertheless can only satisfy his sexual drive in this manner and is unable to combat the desire to do so when it gradually grows within him to an irresistible strength.

It is to this group of individuals that the term 'compulsive' or 'pathological' gambling has been applied. Moran (1969) investigated 50 individuals in whom gambling was a problem. He differentiated five categories within a general group of pathological gamblers. In the majority of his patients, in addition to gambling, there was clinical evidence of other conditions; the gambling behaviour could be considered symptomatic of the underlying condition. In 9 of the 50 patients Moran recognized a pattern of pure compulsive gambling. These individuals had no other psychiatric abnormalities, and yet their gambling was far beyond their means, inducing debts, legal difficulties and prison. He used the term 'pathological gambling' to include all individuals in whom gambling is a problem, irrespective of cause, and confined the term 'compulsive gambling' to the relatively small group in whom there were no other abnormal psychiatric features.

Partly because of the few patients who seek psychiatric help and also because, in general, psychiatrists have neither been interested, nor able to offer help to these individuals, there are relatively few reports of treatment. In spite of extensive psychoanalytic theory concerning this form of behaviour, reports of successful treatment are few and involve intensive and extended treatment with often indifferent results. Bergler (1958) has reported by far the greatest experience. He treated 60 patients, but one quarter left after four to six weeks; he felt that this was because they had come at the behest of relatives and were not themselves convinced that they needed treatment. In 45 cases with twelve to eighteen months protracted analysis, 33 had continued analysis of the whole neurosis and some 30 were reported cured, but of the remaining 12 treatment was confined to the gambling and they then discontinued further attendance.

Victor and Krug (1967) describe successful treatment of a case of compulsive gambling by 'paradoxical intention'. They instructed the patient to carry out a set programme of gambling and this encouragement to carry out forbidden behaviour removed the satisfaction from it. Boyd and Bolen (1968) treated eight pathological gamblers and their wives in group psychotherapy. After 22 months three gamblers remained free of gambling while there was near cessation in the remaining five.

More recently aversion treatment has been reported to alter behaviour in a number of cases of compulsive gambling. Barker and Miller (1966, 1968) described the treatment of compulsive gamblers by aversion, and my colleagues and I also mentioned a case at that time (Seager *et al.*, 1966). A further case has been described by Goorney (1968) with a follow-up period of twelve months. The present paper describes a number of cases treated with aversion therapy with a follow-up report showing the effects of treatment.

Method

Patients were first seen in the out-patient clinic and the usual psychiatric history was taken. Particular emphasis was paid to the onset of gambling, to factors which have allowed it to increase in scope and also to other evidence of neurotic illness or personality disorder. A clinical assessment of the personality was carried out, and the patient completed the Eysenck Personality Inventory (1964). By the time these patients were seen they had all spent large sums of money, considerably more than they could afford and were heavily in debt. Some patients had been in prison on charges of stealing.

The pattern of gambling is usually described in these terms. The patient would have obtained money from somewhere and spent it all in the betting shop on a particular day, leaving at the end of the day's racing with virtually no money in his pocket. He would return home blaming himself for his recklessness and during a tearful scene with his wife would promise never again to be so foolish and would swear to give up all gambling activities. The next morning he would pick up the morning paper and turn to the

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racing page. There he would see one or more runners which he would identify as absolutely certain winners which would solve all his financial difficulties and allow him to regain his standing and self-respect. He would usually not ask his wife for money but would borrow or obtain in some other way sufficient resources to return once more to the betting shop to try his luck. Almost always, of course, he would lose and so the circle would be completed. It seems that the start of the cycle is the point at which he picks up the newspaper and spies the runners who are going to win and thereby solve all his problems.

Those patients who were inveterate gamblers on horse racing and relied on newspapers for information were shown a pile of the day's papers which they were asked to thumb through page by page. This included local and national daily sporting newspapers. In order to prevent the patient knowing when to expect the racing page, individual sheets were separated and arranged in such a way that a racing page came up at one sheet in four, although the various pages were from a variety of newspapers. When each racing page came into view the patient received an electric shock through electrodes attached to the left forearm, the shock continuing until he had discarded the racing page. This routine was carried out once daily, when the patient was resident in the clinic, but less frequently with out-patients. The shock given was sufficiently uncomfortable to cause definite discomfort, but no skin damage. It was provided from an apparatus deriving its supply from the mains, isolated through two transformers to prevent any danger to the patient. The patient was advized that he could withdraw from the situation at any time; the course of treatment was continued until the doctor was satisfied that the racing pages offered no further attraction for the patient and he could pass a betting shop without the wish to enter.

Other gamblers who obtained their information from betting shops were shown slides of betting shops, exterior and interior, lists of runners and of racing tickets. It is interesting to note that in no case were the gamblers in any sense race-goers; most of them had never seen a horse-race in reality, although they had watched on television. One gambler who bet relatively small amounts on horses, but who spent much of his money playing cards or roulette, was treated by electric shocks associated with photographs of poker hands and pictures of roulette wheels.

Interspersed with the photographs to which shocks were given was a relief situation (Thorpe *et al.* 1964) usually consisting of photographs of the gambler's home, his wife, children or others he held in some esteem.

Once treatment was completed, the question arose of how best to maintain abstemiousness. It was recognized (Seager *et al.*, 1966) that it was not sufficient to stop the behaviour, but that it was necessary to try to deal with the underlying marital and domestic difficulties, which, if not initiating the behaviour, had helped in its continuance. Patients were offered supportive psychotherapy, and were also referred to Gamblers Anonymous.

Results

Sixteen patients have so far been referred for treatment, only one of these being a woman. Details are summarized in Table I. Two of these

Table I

Characteristics of gamblers

No.	Age	Sex	Marital status	Children	Personality E	Score N	Suicide attempt	Conviction	Years duration of gambling: Total	Years duration of gambling: Heavy	Form of gambling
1	41	M	Married	3	20	6	—	—	15	2	Horses (Followed form)
2	33	M	Married	0	14	20	—	—	16	10	Horses
3	38	M	Married	2	—	—	—	—	20	10	Horses and Dogs
4	28	M	Married	2	18	16	—	—	5	2	Horses, Roulette (Form)
5	54	F	Married	2	15	16	—	—	10	2	Horses
6	40	M	Married	2	10	4	—	—	20	2	Horses
7	51	M	Married	2	—	—	—	—	20	6	Horses (Form)
8	27	M	Divorced	0	18	11	—	Yes	9	2	Horses
9	27	M	Single	0	13	13	—	Yes	10	7	Horses, Dogs
10	41	M	Married	1	—	—	—	—	25	3	Horses (Form)
11	33	M	Married	3	13	14	—	Yes	8	8	Horses, Cards
12	27	M	Separated	2 (Adopted)	21	15	Yes	—	2	1	Horses
13	28	M	Married	2	8	17	—	Yes	10	2	Horses
14	57	M	Married	2	20	14	—	—	30	3	Roulette
15	21	M	Married	3	17	14	Yes	Yes	4	2	Horses
16	29	M	Married	5	14	6	—	—	7	2	Dogs (Form)
Mean	35·9			2	15·5	12·8			13·2	4·0	

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patients refused to consider treatment, and four more terminated treatment prematurely after the first few sessions. In the majority of cases the patients were referred either from the general practitioner or from another psychiatrist, but one was referred through the Samaritans, one by a Probation Officer and another from a Mental Welfare Officer. Ages ranged from 21 to 57 with a mean of 35·9 years. All but one had been married, but a further two of the married men were separated from their wives, who had left them because of persistent gambling and debts. Several other wives had also threatened to leave and in some cases had used this as a means of compelling the patient to seek psychiatric treatment. Three of the patients had no children, and the size of the other families ranged from one to five children. One patient had two adopted children.

In every case there had been gambling behaviour for many years, usually since adolescence. In only one case, a man of 32, did he claim that gambling started two years before, and it was he who stated that he had a big win to start with. In other cases there was no clear evidence about the effect of a major win in precipitating the heavy gambling. The duration of gambling as a problem varied between one and ten years, with a mean of four years. However, it was important to note that there was fluctuation in the level of gambling, and after a period of heavy debt the patient himself may have rejected gambling for a short period of time. In general there was no strong family pattern of gambling, although most patients agreed that other members of the family did bet. One patient had a father who was a heavy gambler, and another had a father-in-law who was a book-maker; this patient had been employed in his father-in-law's office for a time. Almost invariably, betting on horses through the medium of the betting shop was the most important method of gambling. One patient preferred dogs and usually attended dog tracks, while another patient spent much of his time in gaming clubs playing various forms of cards and roulette. Other patients also visited gaming clubs, but this did not seem to be major part of their gambling activity. Five of the gamblers studied form and were looked upon by their friends as being knowledgeable in the field of racing. Most of the other gamblers agreed that they had little knowledge of form and either betted on outsiders or picked names with a pin or some other chance process. By the time these gamblers were seen, all had heavy debts and five of them had been convicted of offences arising from debts or stealing.

Personality

At interview eight of these individuals demonstrated well marked psychopathic traits. They gave a history of many jobs left for relatively trivial reasons, and of an immature attitude towards their predicament, their family and their responsibilities. In many cases the wife confirmed this view and reported how she was unable to rely on any contribution, either emotional or financial, towards the upbringing of the children. The remaining eight patients showed no psychopathic personality traits; they gave a history of long continuity in a single job, and of a reasonably stable home life, only disrupted relatively recently by gambling behaviour. Two of these individuals were regarded as schizoid—they made poor relationships with their family and also in their work. Even their gambling was isolated, and they seemed to have little contact with their fellow gamblers.

A remarkably consistent finding in this group of patients was the lack of any violent propensities even when provoked. They tended to be unwilling to become involved in any arguments, to run away from disagreeable situations and to sulk quietly. Similarly they never felt provoked to attack nor did they feel able to chastise their children even though it was thought to be merited. Sometimes the reason for this was given as a matter of principle, but much more commonly the patient stated that he could not bring himself to hit anyone, although he sometimes felt that he ought to do so. The Eysenck Personality Inventory was administered to thirteen of the gamblers and the mean extroversion was 15·5 (Standard Dev^{n}. = 3·8) and neuroticism 12·8 (S.D. = 4·7). The general pattern of response was in keeping with a group of extraverted neurotic personality type.

Treatment

Fourteen of the sixteen patients referred for treatment actually commenced. The remaining two, when the nature of the treatment was explained to them, decided not to proceed with it and although both were offered further out-patient supportive psychotherapy they defaulted after single further attendances. Details are summarized in Table II.

In principle, it was decided that in-patient treatment was most satisfactory, at least in the first instance, so that sessions could be at close intervals. However, this proved impracticable because so many of the patients who were already in debt or in fear of losing their jobs were not prepared to put their prospects in jeopardy by taking further time off for treatment. It was only when the patient was out of work that he was admitted to hospital; this occurred on four occassions. For these four, treatment sessions occurred daily apart from weekends. The remaining ten patients were seen on an out-patient basis, usually at weekly intervals. The total range of shocks experienced by an individual varied from 11 to as many as 164 with a mean of 85·5. Treatment was discontinued when the patient reported that he no longer felt an urge to start gambling, no longer looked at the racing pages in the newspaper, and could walk past a betting shop without a strong feeling of wishing to go inside and bet. It is appreciated that this is a purely subjective evaluation and depends on the good faith of the patient and his co-operation.

Follow-up After the Cessation of Treatment

All patients were offered follow-up out-patient appointments. However, because of pressure in the clinic they were discharged once it became apparent that gambling behaviour had ceased to be a problem and domestic

Table II

Treatment and follow-up

	Refused	No. of shocks	No. of shocks	Type of treatment	Length of follow-up in months	Outcome
1	—	42	65	Papers	36	Free of gambling
2	—	12	119	Papers	24	Free of gambling
3	—	3	11	Papers	36	Free of gambling
4	—	8	58	Papers	12	Denies gambling—some doubt
5	—	2	23	Papers	12	Relapsed early
6	—	10	79	Papers	24	Free of gambling
7	Discontinued prematurely	1	15	Slides	Refused	Not known
8	—	8	92	Papers	20	Prison
9	Yes	—	—	—	—	Prison
10	Yes	—	—	—	—	Not known
11	Discontinued prematurely	4	46	Papers	6	Relapsed
12	—	9	164	Slides	12	Not gambling but also not working
13	Discontinued prematurely	3	114	Slides	9	Relapsed
14	—	3	149	Slides	18	Not gambling heavily but has small bets
15	—	10	100	Papers	18	Prison
16	Discontinued prematurely	2	62	Slides	6	Relapsed
Mean		8·7	85·5			

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relationships seemed reasonably stable. They were offered an opportunity of contacting the clinic should there be any recurrence of gambling, and one patient did so and had a further course of treatment of 30 shocks in all. In addition to this the patients were introduced to Gamblers Anonymous.

In practice, relatively few of the gamblers who were treated by behaviour therapy persisted in their attendance at Gamblers Anonymous. One of them pointed out that he was not prepared to say that he was still a compulsive gambler, because he believed he had been cured as a result of the treatment. Others found the preoccupation with past gambling excesses somewhat disturbing, while many were too inarticulate and shy to stand up and talk about their problems in public.

In addition, a specific follow-up visit was carried out by a psychiatric social worker at a variable period after cessation of treatment. The follow-up period varied from three years to six months, and at the time of follow-up five patients remained well. The duration of follow-up in each of their cases were respectively two for three years, two for two years and one for one year. Another patient claimed he was not gambling, but a fellow patient cast some doubt on this report. Another gambler had occasional small bets on horses, well within his means.

Discussion

Out of an original 16 patients, 5 patients have remained free of gambling for a period varying from one to three years since completing their treatment. These results can hardly be called satisfactory and when seen against the pattern of the compulsive gambler who tends to fluctuate in his behaviour so that there are periods of quiescence followed by episodes of heavy gambling they do not arouse enthusiasm. Nevertheless, those who have remained free do describe a very definite change in their interests and behaviour. Whereas before they had always gambled, although at times had been able to stave off the more overwhelming preoccupation now they found they were no longer interested in the pattern which had overwhelmed their lives. They had lost the drive to spend every available pound in the betting shop in the vain hope of converting it into a fortune.

One must ask whether it was the specific action of aversion treatment which brought about the change. Superficially this certainly seems to be so, and I think there is little doubt that the actual form of treatment played a part in breaking a vicious circle, but other aspects are also important. At least two of the successfully treated patients commented to the social worker that they had benefited from the fact that somebody had taken an interest in their problems and had manifested the clear desire to help them and spend a lot of time with their problem. Yet although considerable time had been spent with all these patients, only a small proportion seemed to benefit from it. One patient, the first failure as it turned out, after a short course of treatment stated how well she was feeling and how convinced she was that she would never gamble again. She commented to another doctor as she left that it was not actually the treatment which had cured her, but the care taken by the very nice doctor who had helped her. Within a very short time she was gambling again and refused all efforts to get her to attend the clinic for further treatment. The impression is that patients who do well are those who are reasonably stable in other ways apart from their gambling problem, who have held down a job for a number of years and who have managed to survive the difficulties which their gambling has induced, both in the home and at work. One might argue that it is in these patients that one most clearly sees a learned pattern of behaviour, possibly following a large win, which has encouraged further dependence on Lady Luck. In the more immature psychopathic individual the gambling is simply a part of the overall lack of social organization and maturity, and this at the same time prevents forming a relationship with the therapist, who is therefore unable to help.

Frequency of treatments may affect efficacy, since there is a very marked disproportion between exposure to stimuli in an aversive situation and exposure to stimuli in the world at large; the latter stimuli are obviously presented without associated shocks. In this series, a few patients received treatment as in-patients, with

shocks given every day and reduced opportunity allowed for presentation of gambling stimuli outside the treatment situation. Two of these are free of gambling and two were unsuccessfully treated. No conclusion can therefore be drawn about the advisability of in-patient treatment, although it is a personal impression that efficacy is related to frequent treatment and that admission to hospital has the added advantage of controlling environmental stimuli to some degree.

All patients and the spouses were offered continuing interviews. In addition, they were introduced to the local branch of Gamblers Anonymous. This is an organization based in principle on Alcoholics Anonymous. It was started in California and introduced in London in 1964 (Casson, 1964). Those gamblers who attend the meetings are expected to announce that they are compulsive gamblers in whom it is impossible to assume that the condition has been cured, but that they are liable to fall victim to their behaviour at any time in the future if they should allow themselves to risk temptation. They each give an account of previous difficulties and how they have coped with them; and they offer mutual support in the event of a crisis.

Perhaps more important, there is a parallel organization, Gam-Anon, for the spouse of the compulsive gambler. This is usually the wife, although not necessarily so, as there are occasional women gamblers. Gam-Anon provides both support and advice for the spouse, and this is the most important aspect of a difficult marital situation. The wife has had too much experience of her husband's promises to believe that any change has taken place in his situation. She finds it hard to accept that now he can be believed when he is late home from work and says that he missed the bus, or if his pay packet is ten shillings short because there was really some error in calculation or some extra stoppages. Hitherto this has always indicated some excuse which is the signal of another gambling spree.

Scodel (1964) reports a study of Gamblers Anonymous from the United States. He was not entirely satisfied with the therapeutic value of the organization, which he felt was an attempt to form an in-group of alienated individuals. He also referred to the importance of the marital situation in the psychopathology of compulsive gambling, and felt that the wives might often unconsciously be manipulating the patient's behaviour to maintain them in a dependent situation.

Compulsive gambling is probably more widespread a problem than is generally realized. Enquiries by Probation Officers and prison staffs have led to the view that many individuals have committed crimes as a result of their inability to avoid spending money on gambling. Similarly enquiry into the background of neurotic illness among housewives often leads to the unexpected finding that the husband is in financial difficulties because of excessive gambling. This problem may not present itself to the psychiatrist in the first instance, but it is one which should be looked out for. These individuals have a very real problem which requires help. The leader in the *British Medical Journal* casts doubt on the concept of the compulsive gambler, and suggests that this is simply a matter of somebody enjoying himself to excess at the expense of the people around him. Anyone who has met some of these unfortunate individuals will recognize that there is little enjoyment now to be found, although this may have been the origin of the problem.

Summary

1. The concept of Compulsive Gambling is discussed.

2. Treatment of 14 compulsive gamblers using electrical aversion, is described.

3. Five patients remained free of gambling during a follow-up period of at least twelve months. In two other cases, one claimed not to be gambling, but there was some doubt about this, and the other showed minor activity only.

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