
Remote Psychokinesis

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Abstract: A web-based experiment was constructed wherein remote participants were asked to try and influence the activity of a split-beam laser. On accessing the web page, the computer collected either a short or long, based on a pseudo-random algorithm, run-length data sample while the participant was concentrating on having some sort of influence. A summary of the results (mean absolute deviation and variance) was then presented to the participant as feedback. Significant differences ($U = 1902, p < .001$, one-tailed) were found between control and experimental data for the laser output, based on the mean absolute deviations from a baseline value. Results were suggestive ($U = 2696, p = 0.08$, two-tailed) but non-significant for the variance. These results were interpreted as providing evidence for a possible PK effect by a remote influencer. No obvious relationship was found between the laser output and the distance of the influencer. Correlations were found in both control and experimental data suggesting a relationship between geomagnetic field activity and laser output, showing a significantly greater deviation and non-significantly higher variability when geomagnetic field activity was high. No significant differences were found between short and long sample lengths, contrary to what would have been expected under the DAT hypothesis.

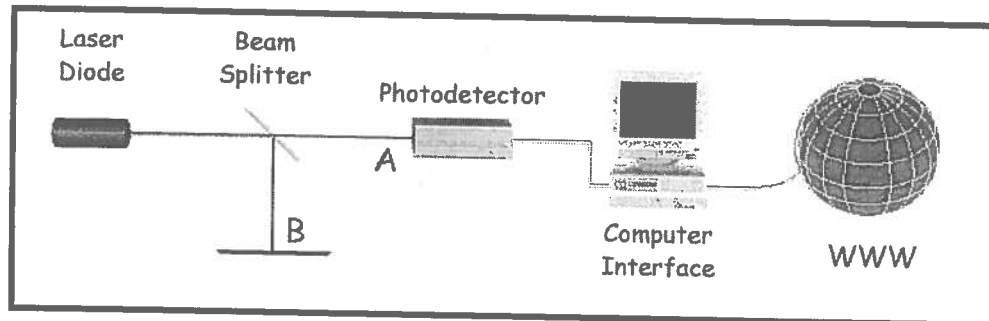
Introduction

Psi is often said to be independent of space-time, as effects have been found in protocols utilising large distances, some being transcontinental (e.g., Schlitz & Gruber, 1980). However, all we can conclude from such studies is that a psi effect, if due to an energetic signal, depends on the intelligibility of the signal and not necessarily the signal strength — a point made by Rush (Edge et al., 1987). There have been few studies looking specifically at a wide range of differences in distance, probably due more to the popular paradigms in use, which look at psi as being either a goal-oriented effect relating to quantum theoretical observation — the Observational Theories (OTs), such as Walker's (1975, 1984) proposal — or a pre-cognitive selection procedure, such as the Decision Augmentation Theory (DAT) of May et al. (1995). If an OT or DAT better describes the operational mechanism underlying psi effects, then those effects should be independent of distance. If, however, there were an actual psi signal, it

may show some degree of attenuation due to distance.

The primary aim of the experiment was thus to look at whether the influencer's distance from the target system would affect the outcome of a psychokinesis (PK) protocol experiment. To maximise chances of a PK effect being found, a target system was used that would hopefully be sensitive to an energetic psi signal as well as allowing opportunity for the mechanisms of the OTs or DAT to occur. The chosen system consisted of a laser where the beam was split into two parts of approximately equal intensity, using a half silvered mirror. In such a system, the laser light emitted from a laser diode may be seen as being composed of photons — the quanta of light. These photons will each have the same amount of energy, and be emitted in a beam with very little divergence. If they are incident on a half-silvered mirror, they have an equal probability of being reflected from the mirrored surface or being transmitted through it. A light sensitive detector placed in the path of one of the beams would then measure a constant

Figure 1
Schematic layout of laser target system



number of photons incident per second, this number being roughly half the amount of photons emitted by the laser. The number of emitted photons is normally assumed to be a constant, but will show fluctuations based on the stability of the supplied power and on the amount of noise within the semiconductor (based on the ambient temperature and zero-point field fluctuations). The number of those photons which actually reach the sensor will be determined by the amount of scattering and absorption by air molecules, plus an approximately 50% transmission loss due to the half-silvered mirror. There would also be variations relating to the position of the beam on the photo-detector surface, caused by air currents and physical vibrations.

If PK were the result of an observational 'wave-function collapse' process, then the beam-splitting mirror would represent an area where the wave-function of each individual photon entered a superposition state of photon-transmitted / photon-reflected, the transmission mechanism being a quantum tunnelling effect. If a conscious observation of the system could select, or at least bias, the final measured outcome, then this would allow such an effect to occur with a clear focus point for the observer (Euan Squires, personal communication). If, on the other hand, the PK process was related to actual fluctuations of some physical variable, then, as well as the semiconductor properties of the

laser and photodetector, the mirror represented a further site where quantum noise could enter the system (Youn et al., 1993).

It was decided to look for two possible 'psi effects'. One would be the mean absolute deviation from control levels of the level of laser light measured at the photodetector; the other would be the variance of this light. It was predicted that the mean absolute deviation would decrease with distance (an attenuation effect) whereas the variance would increase with distance (a 'defocusing' or distortion effect). Additionally, a mixture of short and long data sampling periods were used. This would allow a test of some of the predictions of DAT by comparing effects in the different sample length data.

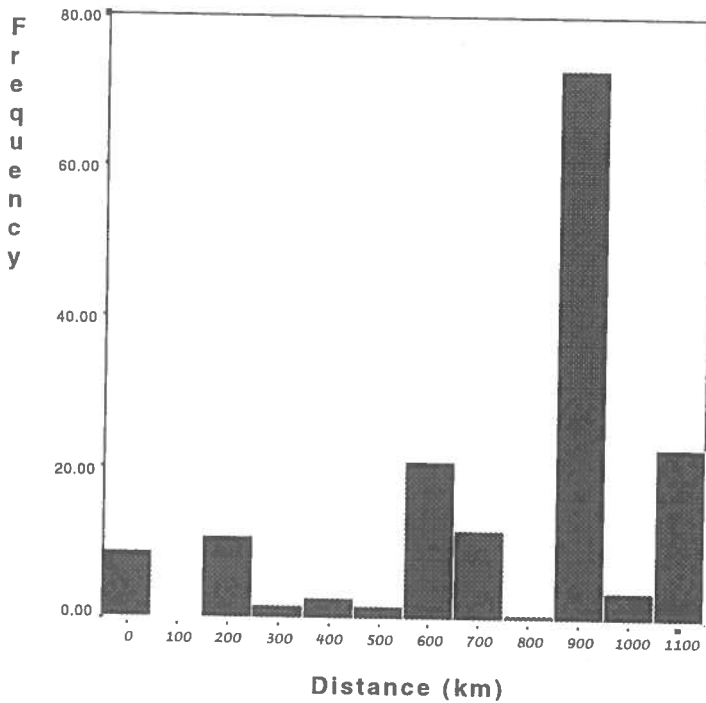
Method

Apparatus

The laser was a 100 milli-Watt semiconductor-junction diode device, operating at a wavelength of 650 nanometres. The photodetector was also a semiconductor device, giving an electrical output linearly related to the intensity of light (the number of photons) incident upon it, though also having a component due to thermal noise and zero-point field fluctuations. The laser was placed in a light-proof box with the laser beam split into two beams of approximately equal intensity (A and B in Figure 1). Beam B

REMOTE PSYCHOKINESIS

Figure 2
Distribution of results by distance



was absorbed by the box wall. Beam A was detected by a photodiode connected to an analogue to digital computer interface, which output a value related to the intensity of the incident beam. The whole assembly was seated in a box of polystyrene packaging material, this having been found to be most effective in reducing all but the most localised vibrations. As the system was only running when the room it was in was not otherwise being used, this seemed to be sufficient to avoid contamination due to physical vibration. No data was used from participants who were in the same building as the laser system, to avoid any possibility of manipulation of the system, subconsciously or otherwise. Finally, the laser system was connected to the computer via an analogue to digital interface. Once initiated by the user, the computer would take either one hundred or one thousand contiguous samples, the sample length being based on a pseudo-random decision. The sample rate was 1

kHz for the long 1000-byte sample, and 100Hz for the shorter 100-byte sample, so a complete sample would take 1 second in all cases. Although only one participant (the ostensible influencer) at a time could actually cause data from the laser system to be sampled, the average time a participant would have to wait before they could make their attempt was typically only a few seconds, virtually indistinguishable from the normal delays found with internet connections. Control sessions were taken by automatically initiated sessions. The protocol was identical to the experimental session except for the absence of a participant, allowing for any non-PK effects in the data to be identified. In both experimental and control cases, the absolute deviation from the starting baseline value and the variance of the sample was calculated. When the experiment was on-line, the laser system was continually running. Participants merely caused the data from their influence period

to be analysed and the results saved rather than starting and stopping the operation of the physical system.

The participant interface consisted of a web page written in HyperText Mark-up Language (HTML) and utilising the standard form submission protocol to initiate the data recording program. This program was written in Visual Basic, using freeware common-gateway interface (CGI) Visual Basic code (Denny, 1978), and connected to the web using the win-HTTPD PC server software. All software was run on a 486/66 PC under the Microsoft Windows 3.1 operating system. This made use of the World Wide Web (WWW), a graphical user interface (GUI) system for transferring information over the telephone-linked global network of computers known as the Internet. The web page was located at the University of Nevada's Consciousness Research Laboratory (CRL) website (the URL at the time was <http://eeyore.lv-hrc.nevada.edu/~cogn/cogno.html>). Such a system enabled people from around the world to take part in the experiment at any time of day or night, at their own pace, and needing no more knowledge than the use of a piece of software known as a web browser, readily available to anyone with access to a computer with an Internet connection. It would also allow for a much wider range of distances to be looked at than any more formal experimental arrangement, and was essentially automated, requiring no experimenter input once it had been set up.

Procedure

Upon first accessing the page, the user was presented with a page giving a brief description of the experimental set-up and instructions for the PK task. The instructions told them that they were attempting to alter the output of the laser simply by concentrating on doing so and that they would receive graphical feedback immediately after their attempt showing how well they did. Users were told they could use any strategy they wished. There was also a schematic diagram of the laser for

them to concentrate on. When ready, they entered their approximate latitude and their time-zone by selecting it from a pull-down menu of available options. If they did not know this information, they were asked to enter the name of their location so that the author could later work out the proper co-ordinates. They were then told to use the mouse to click on a button at the bottom of the page, and that this action would immediately initiate the data recording. Once this button had been clicked, the web browser reported it was accessing data, still displaying the schematic diagram for the user to concentrate on. On completion of data recording, a new web page was automatically displayed. This page showed graphical feedback in the form of two schematic bar graphs, similar in appearance to the sound level LED displays seen on some hi-fi systems. The first graph showed the standard deviation of the laser system for the samples taken, the second the deviation in intensity from the initial baseline value. The higher the two values, the more segments of the bar were 'lit up'. Underneath this was a brief explanatory paragraph, explaining the meaning of the graphs and giving some indication of how likely this was to have occurred by chance. If either the standard deviation or the baseline deviation were above a particularly high value, a further input box appeared asking the user to detail what particular mental strategy they used while attempting to influence the system. Finally, the user was thanked and, after a few seconds, returned to the on-line experiments menu. The statistical results were automatically recorded to the computer's hard disk along with the IP address (Internet Protocol Address — a fixed, unique number assigned to every computer connected to an external network) and the location data. Due to the limitations of this particular web server set-up, it was not practical to save the raw data for each user, but only the end statistical results. Had the raw data been saved to hard disk, there would have been opportunity for other users to interrupt a session and for data to be confused

between different trials, as well as significantly increased delay for the web interface user. Instead, data was stored in memory and the statistical analyses performed immediately after data collection. That these analyses were accurate was thoroughly checked during initial testing.

Hypotheses

Primary predictions were that:

H1a The measured laser output would show a greater absolute deviation over time for experimental attempts than for the control data.

H1b The measured laser output would show different variances for the experimental attempts when compared to the control data.

H2 The magnitude of the absolute deviation would be inversely related to the distance of the influencer from the target.

H1a and H1b predict that there will be a PK effect to measure. H2 predicts a distance dependency of any PK effect.

Secondary exploratory predictions:

H3 The variance would increase with influencer distance.

H4a High geomagnetic field activity would correlate with high absolute deviations of the laser output.

H4b High geomagnetic field activity would correlate with high variance of the laser output.

H5 Shorter sample length would show greater absolute baseline deviations.

H3 predicts that the increasing distance of the influencer from the target system would adversely affect any PK effect.

H4a and H4b predict that the often reported (e.g. Dalton & Stevens, 1996) correlation of psi with geomagnetic field conditions would be found.

H5 is predicted by DAT, as a selection model of PK would show a greater effect for shorter sample lengths, the normal operation of the laser system being more likely to contain periods of naturally

occurring, disproportionately high or low activity.

Analysis of Results

The total number of trials (excluding any accesses from within the laboratory environs) was 194. Of these, 161 were useable, the laser data for the other 33 trials not having been saved to disk due to a brief period of technical problems after the author had returned to the UK.

Date information on the control data was also partially corrupted due to disk failure, resulting in a reduced control-data pool for the geomagnetic analysis. All users had provided sufficient information (latitude and time-zone) for their approximate geographical location to be determined.

Variance was calculated from the squared standard deviation. The absolute baseline deviation was used as the direction of any deviation was unimportant for these analyses. The units of the values quoted are unsure as they represent the raw values output by the A/D converter. The influencer's distance from the target system was roughly calculated from their given time zone and latitude. These were used to give an approximate spherical co-ordinate on the surface of the Earth. The most direct circumferential distance could then be calculated between their co-ordinates and that of the target system.

A summary of the results is given in Table 1. Control data were taken under exactly the same conditions as experimental data but in the absence of any participant, on a number of different dates. Overall, it can be seen that the experimental data was generally greater in magnitude than the control data, indicating that there were differences in the laser system's operation during the participant-influence attempts.

A Mann-Whitney nonparametric test was performed to compare the experimental and control data, this being used as the distribution of the data was not normal. Results are given in Table 2.

Table 1
Descriptive statistics of laser output

	N	Control Data		Experimental Data	
		Mean of Variances	Mean of Absolute Baseline Deviations	Mean of Variances	Mean of Absolute Baseline Deviations
All data samples	161	0.419	0.144	0.466	0.405
100 byte samples	77	0.130	0.020	0.227	0.377
1000 byte samples	84	0.669	0.251	0.684	0.431

Table 2
Mann-Whitney nonparametric comparison of control and experimental data

	Mean for Control	Mean for Experiment	Mann-Whitney U	Equivalent z	P
Abs. Devn	0.144	0.405	1902	4.186	< 0.001 (1-t)
Variance	0.419	0.466	2696	1.809	0.08 (2-t)

As predicted, the mean absolute deviation was significantly greater for the influence sessions than in the control data. H1a is therefore supported. There were differences in the variances of control and experimental data as predicted, but this was not significant. H1b is not supported.

Table 3 shows the linear regression coefficients for the laser output against influencer distance. For this regression, a weighting scheme was employed to try and offset the very uneven distribution of results (as shown in Figure 2). A mean value for the absolute deviation and for the variance was calculated for each distance, weighted by a factor w , where w equalled the number of values contributing towards the average and divided by the total number of data-points for all distances. No significant relationships were found for the experimental data, with the laser deviations and variances showing a small tendency to increase with distance rather than decrease. The R^2 value, indicating the amount of variance accounted for by the calculated regression equation, shows a less than 1% and 6% accountability for the laser

deviations and variances respectively. To see whether there might still be a valid but very small effect, the control data set had a distance randomly assigned to each datum. The range of distances used was the same as in the experimental data.

The results of this are also shown in Table 3, labelled 'mock distance data'. In this case, the regression lines were a better fit for the randomly assigned data than for the actual data, though still not significantly. Clearly there was no simple relationship between a PK effect and influencer distance. H2 and H3 were therefore not supported.

Next, the activity of the geomagnetic field (GMF) was looked at in relation to the effects found. Table 4 shows the laser output data correlated against the value of the ap index (a daily measure of global GMF activity). Analyses were performed for the entire control and experimental data sets. As predicted, the GMF activity did significantly correlate with the absolute deviations for all cases of the experimental data. This could be due to an actual influence effect of the geomagnetic field on

REMOTE PSYCHOKINESIS

Table 3
Regression coefficients of laser output against distance

	Experimental Data		'Mock Distance' Data	
	R	R ²	R	R ²
Abs. Devn	0.091	0.008	0.168	0.028
Variance	0.242	0.059	0.129	0.017

Table 4
Spearman r correlations of laser output with geomagnetic activity

	N	Variance r	Correlation equiv. z	Abs. Deviation r	Correlation equiv. z
Experimental Data	160	0.138	1.740	0.336	4.237
All Control Data	41	0.460	2.910	0.284	1.800

Note: equivalent z scores were calculated for ease of comparison between different sample sizes using the approximate method of $z = r \sqrt{(n-1)}$. A discrepancy in N is seen as only 160 of the experimental and 41 of the control data points being able to be matched with geomagnetic data, due to missing or corrupted data.

the laser system, or a modifying effect on a secondary influence (such as a PK effect), or a combination of both. H4a was therefore supported.

Increased geomagnetic field activity did appear to be associated with an increase in variance. This was not significant for the two-tailed prediction made for the experimental data as a whole, although it was close. For the control data, where it was assumed that there was no PK effect operating, a correlation with the geomagnetic field was again found for both the deviation and the variance, implying that the geomagnetic field might be having a direct effect on the target system rather than a mediating effect on any possible PK influence. Thus H4b was not supported, although the data were suggestive of the predictive effect. Finally, a comparison was made between the NP deviations for the short and long sample lengths, testing some of the ideas of selection versus influence models. The results are given in Table 5. In all cases, whether the run length was 100 or 1000 bytes was not apparent to the participant, and the data

collection was initiated by a single button press.

There was no significant difference between the deviations seen in the 100 byte samples and in the 1000 byte sample, the longer sample lengths actually having a slightly greater mean deviation, opposite to the DAT prediction. H5 was thus not supported. No comparison was made for the variances, as these would always be greater for a longer sample length, irrespective of any possible PK effect.

Discussion

Significant differences were found between control and experimental data for the laser output, based on the mean absolute deviations from a baseline value. Results were suggestive but non-significant for the variance. These results were interpreted as providing evidence for a PK effect by a remote influencer. Although a few individuals did contribute up to eight repeat attempts, most contributed less than three, suggesting the results were not due to any one person. The largest individual

Table 5
T-test comparison of different sample lengths for experimental data

	Mean z^2 (100)	Mean z^2 (1000)	t	p (1- t)
Deviation	0.987	0.988	-0.002	0.499

effects were seen for those distances where most attempts were made, though this did not necessarily indicate repeat attempts by a particular influencer. No linear (or other obvious) relationship was found between the laser output and the distance of the influencer. The lack of any distance relationship may have been partly due to the non-uniform contributions at each distance, although a weighting scheme was used in an attempt to compensate for this. The method of calculating distance from the target was also very approximate, though it seems unlikely this would have completely obscured a distance relationship if such existed. The possibility remains that stronger PK effects might be found at close distances, with the large distances considered contributing only weak, noisy effects. Future studies of this type should use a greater concentration of results for close distances, and attempt to ensure a more uniform contribution of influence attempts over the range of distances used.

Correlations were found suggesting a relationship between geomagnetic field activity and the output of the laser, which showed a significantly greater deviation and non-significantly higher variability when geomagnetic field activity was high. As this effect was also seen in the control data i.e. even in the absence of any participant influence, this might suggest an effect of the geomagnetic field on the laser system directly rather than on any supposed PK mechanism. As the geomagnetic field is electromagnetic in nature (although it is associated with other physical changes in the environment e.g. gravitational), this could mean that there is some currently unrecognised interaction between electromagnetic fields and the types of target systems used in psychokinesis experiments. If this is indeed the case, it has major

implications for some of the supposed relationships between the geomagnetic field and psi. The typical assumption made by psi researchers (e.g. Persinger, 1989; Dalton & Stevens, 1996) that any effect is on the psi agent, or on the psi-target system interaction, rather than directly on the target system itself. More research on such potential interactions needs to be done.

The data from this study did not support a selection model such as DAT. A comparison of laser deviation data between the short and long sample lengths showed no significant differences in the predicted direction, the effect actually being very slightly stronger for longer sample lengths.

In more general terms, the experiment showed that the Web can be a viable medium for PK type experiments, where there is an external interfaced target. Although the experiment had to be terminated earlier than expected, there was a good response both in the number of and the information provided by the participants. The only unusable responses were due to problems at the lab in which the system was situated and not due to omissions on the parts of participants. Any such data collection technique will obviously suffer from a higher level of noise, with some participants not paying particular attention to their attempt to have an influence effect, but this may be offset by the greater number of possible participants and the greater range of locations.

There were however several problems with the set up used. Calculating the deviation as being the difference between initial and final values of the detected laser output was not the best way of detecting variations, with the resulting need to compare the experimental data with control periods. A better solution, unfortunately not possible with the equip-

ment available at the time, would be to take control data while the participant was reading the instruction screen, immediately followed by the influence data. Even so, it is difficult to see how the method used could have given spurious results. The impracticality of saving the raw data was due to the software being used. More recent developments (e.g. use of a multi-tasking web server) would now allow simultaneous, participant-linked files to be saved without significant delays in the displaying of results or possibility of data mixing. It would also have been interesting to have had some form of real time feedback during the influence period, rather than just the end result. This would not necessarily have improved effect sizes, but would, according to some participant feedback, have made the task more absorbing. Again, this was not possible at the time but may be possible in future studies with the recent advances in real time web interfacing techniques. There were also problems with some data files due to problems with disk storage and accessing, causing partial corruption to the control data file. While most of the problems could be overcome, such problems emphasise the need to create frequent backup files when conducting any type of web-based experiment!

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Psychokinese Op Afstand

Samenvatting: In een via het Web uitgevoerd experiment werd deelnemers gevraagd te proberen op afstand de werking van een dubbelstraalslaser te beïnvloeden. Na het oproepen van de web-pagina koos de computer, gestuurd door een pseudo-random algoritme, een dataset voor een lange of voor een korte sessie, terwijl de deelnemer probeerde door middel van concentratie een of andere invloed uit te oefenen. Daarna werd een samenvatting van de resultaten (gemiddelde absolute deviatie en variantie) als feedback naar die deelnemer gestuurd. We vonden significante

verschillen ($U = 1902, p < 0.001$, enkelzijdig) tussen de controledata en de experimentele data van de laseruitgang, gebaseerd op gemiddelde absolute deviaties ten opzichte van een basiswaarde. De resultaten waren in de voorspelde richting ($U = 2696, p = 0.08$, dubbelzijdig), maar de variantie was niet significant. Deze resultaten worden beschouwd als bewijs voor een mogelijke PK-beïnvloeding op afstand. We vonden geen duidelijk verband tussen de laseruitgang en de afstand tot de deelnemer die probeerde deze laser te beïnvloeden. Zowel de controledata als de experimentele data van de laseruitgang leken te correleren met de activiteit van geomagnetische velden. Bij een hoge geomagnetische activiteit was de deviatie significant groter en de variabiliteit niet significant groter. Er was geen significant verschil tussen lange en korte sessielengte, wat te verwachten zou zijn op grond van de DAT-hypothese.

Psykokinesi På Avstånd Psykokinesi på Avstånd

Sammanfattning: Man konstruerade ett webb-experiment i vilket deltagare ombads att försöka påverka en "split-beam laser". Genom att hamna på webbsidan, valde datorn, styrd av en pseudo-slumpalgoritm, ett dataset för en lång eller kort session, medan deltagaren genom koncentration försökte påverka det hela. Efter detta presenterades en sammanfattning av resultaten (den genomsnittliga absoluta deviationen och variansen) för deltagaren som feedback. Vi hittade signifikanta skillnader ($U = 1902, p < 0.001$, ensidig) mellan kontrolldata och försöksdata för laseroutput, baserade på de genomsnittliga avvikelserna i förhållande till basvärden. Resultaten liknade förutsägelsen ($U = 2696, p = 0.08$, tvåsidig), men variansen var inte signifikant. Dessa resultat betraktas som bevis för möjlig PK-effekt på avstånd. Det fanns inget tydligt förhållande mellan laser-output och deltagaren som försökte påverka lasern. Både kontrolldata och laserutgångens försöksdata verkade korrelera med geomagnetiska fält. Vid stor geomagnetisk aktivitet var avvikelserna signifikant större och variabiliteten inte signifikant större. Det fanns ingen signifikant skillnad mellan lång eller kort sessionlängd, som skulle kunna förväntas enligt DAT-hypotesen.

Psychokinese auf Abstand (Remote PK)

Zusammenfassung: In einem internetgestützten Experiment sollten räumlich entfernte Versuchsteilnehmer versuchen, die Aktivität eines Doppelstrahl-Lasers zu beeinflussen. Beim Zugang zur Web-Seite wählte der Computer, gesteuert von einem Pseudozufalls-Algorithmus, Datensätze für je einen langen oder einen kurzen Run, während sich der Versuchsteilnehmer darauf konzentrierte, auf irgendeine Art einen Einfluß auszuüben. Eine Zusammenfassung der Ergebnisse (mittlere absolute Abweichung und Varianz) wurde dem Teilnehmer anschließend als Feedback angezeigt. Signifikante Unterschiede ($U = 1902, p < .001$, einseitig) ergaben sich zwischen den Kontroll- und den Versuchs-daten für die Laserleistung, basierend auf mittleren absoluten Abweichungen von einem Grundwert. Ergebnisse für die Varianz gingen in die prognostizierte Richtung ($U = 2606, p = .08$, zweiseitig) waren aber nicht signifikant. Diese Ergebnisse wurden als Beweis eines möglichen PK-Effekts auf Abstand interpretiert. Kein offensichtlicher Zusammenhang ergab sich zwischen der Laserleistung und dem Abstand der einflussnehmenden Person. Korrelationen, sowohl aus den Kontroll- als auch aus den Versuchsdaten, lassen eine Beziehung zwischen der Aktivität geomagnetischer Felder und der Laserleistung vermuten. Bei höher geomagnetischer Aktivität war die Abweichung signifikant größer, die Variabilität nichtsignifikant größer. Es wurden keine signifikanten Unterschiede zwischen langen und kurzen Runs festgestellt, wie sie unter der DAT-Hypothese zu erwarten gewesen wären.

Psicocinesi Remota

Sommario: Sfruttando la rete Internet è stato condotto un esperimento nel quale i partecipanti lontani dovevano cercare di influenzare l'attività di un raggio laser. Entrando nella pagina web, mentre il partecipante si concentrava per produrre un qualche genere di influenza il computer

REMOTE PSYCHOKINESIS

raccoglieva un campione di dati, che in base a un algoritmo pseudocasuale poteva essere breve o lungo. Una sintesi sommaria dei risultati (deviazione dalla media assoluta e varianza) veniva poi presentata al partecipante come feedback. Tra le emissioni laser di controllo e quelle sperimentali sono state rinvenute differenze significative ($U = 1902, p < .001$, a 1 coda) considerando le medie delle deviazioni assolute da un valore di riferimento. Per la varianza i risultati sono stati indicativi ($U = 2696, p = .08$, a 2 code) ma non significativi. Questi dati sono stati interpretati come indicativi di un possibile effetto PK da parte di un agente lontano. Non è stata rinvenuta alcuna relazione manifesta tra emissione laser e distanza dell'agente. Sono state invece trovate correlazioni sia nei dati sperimentali sia in quelli di controllo che suggerivano un rapporto tra l'attività del campo geomagnetico e le emissioni laser, con deviazioni significativamente maggiori e variabilità non significativamente superiori quando l'attività del campo magnetico terrestre era più intensa. Non è stata rinvenuta alcuna differenza significativa tra campioni di durata breve e quelli di durata lunga, come ci si sarebbe invece aspettato in base all'ipotesi DAT.

Psychokinèse à Distance

Résumé: Nous avons mis en place une expérimentation sur le Web dans laquelle les participants devaient tenter d'influencer, à distance, l'activité d'un laser à rayon divisé. En accédant à la page web, alors que le participant devait se concentrer en tentant d'avoir une influence, l'ordinateur générait un échantillon de données court ou long, issu d'un algorithme pseudo-aléatoire. A la fin, une synthèse des résultats (déviations moyennes absolues et variances) était présentée au participant comme feedback de l'expérience. Des différences significatives ($U = 1902, p < .001, 1-t$) basées sur la déviation moyenne absolue par rapport aux valeurs de la ligne de base ont été trouvées entre les données expérimentales et les données témoins, Les résultats étaient suggestifs ($U = 2696, p = .08, 2-t$), mais non significatifs pour la variance. Ces résultats ont été interprétés comme une preuve potentielle d'un effet PK à distance. Nous n'avons trouvé aucune relation entre la distance du sujet et le comportement de l'appareil laser. Par contre, il y a eu une corrélation significative et positive entre la déviation moyenne et l'importance de l'activité géomagnétique, et ceci tant pour les données expérimentales que pour les données témoins. Cette relation tend à montrer une déviation significativement supérieure et une variabilité supérieure mais non pas significative, lorsque l'activité du champs géomagnétique était supérieure. Aucune différence significative n'a été trouvée entre les échantillons courts et longs, en dépit des attentes selon l'hypothèse DAT (Data Augmentation Theory).

Psicocinesia Remota

Resumen: Se llevó a cabo un experimento en la Red en el cual se le solicitó a participantes remotos/as que trataran de influenciar la actividad de un rayo laser dividido. Al tener contacto con la página en la Red, la computadora producía una prueba corta o larga, basada en un algoritmo pseudo-aleatorio, mientras el/la participante se concentraba en tener algún tipo de influencia. Los/as participantes entonces recibían un resumen de los resultados (el promedio de la desviación absoluta y la varianza). Se encontraron diferencias significativas ($U = 1902, p < .001, 1t$) entre los datos controles y los datos experimentales para el laser, basado en los promedios de las desviaciones absolutas de un valor base. Los resultados fueron sugestivos ($U = 2696, p < .08, 2-t$) pero no significativos para la varianza. Estos resultados se interpretaron como evidencia de un posible efecto PK por una persona remota. No se encontró una relación entre el laser y la distancia con la persona que trataba de influenciarlo. Se encontraron correlaciones tanto en los datos controles y los experimentales que sugerían que había una relación entre la actividad del campo geomagnético y el comportamiento del laser, el cual mostro mayor desviación a nivel significativo y mayor variabilidad, pero no significativa, cuando la actividad geomagnética era alta. No se encontraron diferencias significativas entre segmentos cortos y largos, según sería esperado con la hipótesis DAT.

Psicocinesia à Distância

Resumo: Um experimento para ser realizado na rede de computadorer (Internet) foi construído. Nele, os participantes, que se encontravam à distância, foram solicitados a influenciar a atividade de um equipamento destinado a dividir a luz do raio laser. Enquanto o participante acessava a página da Internet em que o programa se encontrava, o computador coletava uma amostra de dados de curta ou longa duração, ao mesmo tempo em que o participante se concentrava em exercer algum tipo de influência. Um resumo dos resultados (média absoluta, desvio e variância) foi então apresentado ao participante como *feedback*. Foram encontradas diferenças significativas ($U = 1902$, $p < .001$, $1t$) entre os dados da situação controle e da situação experimental para a saída do laser, relacionada à média de desvios absolutos em relação ao valor da linha média. Os resultados foram sugestivos ($U = 2696$, $p = .08$, $2t$) mas não significativas para a variância. Esses resultados foram interpretados como evidenciadores de um possível efeito PK por um influenciador à distância. Nenhuma relação óbvia foi encontrada entre o a saída do laser e a distância do influenciador. Foram encontradas correlações tanto nos dados experimentais quanto nos dados controle sugerindo uma relação entre a atividade do campo geomagnético e a saída do laser, demonstrando um desvio significativamente maior e uma variabilidade não significativamente mais elevada quando a atividade do campo geomagnético era alta. Nenhuma diferença significativa foi encontrada entre as amostras de curta e de longa duração como teria sido esperado sob a hipótese DAT.