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Multiple Personality—An Objective Case Study

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Summary. A case of multiple personality is presented and described. Psychological and neurophysiological parameters obtained on the personalities are evaluated. Major differences between the personalities in the processing of sensory information (augmenting-reducing parameter) are discussed.

Introduction

The phenomenon of multiple personality has long occupied a controversial position in the field of psychiatry. The first recorded case of 'exchange personalities' was published in 1791 by Eberhardt Gmelin. However, at least some of the well-known cases of possession recorded over centuries, particularly those cases of somnambulistic possession (in which the subject loses consciousness of his own self while another entity acts and speaks with its own individuality) have been considered to belong to one variety of multiple personality. During the nineteenth century the controversy was between the associationists, who spoke of mental split and loss of connection between groups of associations, and the organicists, who maintained the concept of organic modification of the brain. Towards the end of that century the factors of role-playing, motivation, and regressive phenomena were recognized. After 1910, the diagnosis of multiple personality fell into disrepute. Published accounts became infrequent. It was felt that such notable investigators as Despine, Flournoy, Janet and Morton Prince had been duped by their subjects. Those doubting the validity of such a clinical entity cited those cases in which the development of an alter personality 'conveniently' avoided the responsibility for some unacceptable behaviour. Others noted the use of hypnosis to study and facilitate the emergence of one or more alter personalities and the fact that such alter personalities could be formed *de novo* by skilled hypnotists in certain individuals without previous history of such phenomena (1, 2, 3).

Only a few investigators have gone beyond case descriptions to study this phenomenon by objective means. Prince (1908) used the McDougall categorization of emotions in the study of his patient Miss Beauchamp (2). Osgood and Luria (1957) utilized the semantic differential in their analysis of Thigpen and Cleckley's patient (Eve White, Eve Black and Jane) and were able to show clear differences between these personalities (4). In Italy, Morselli (1953) described the case of Marisa, in which EEGs were recorded and found different in the two personalities (5). More recently, Ludwig *et al* (1972) evaluated the patient Jonah by using extensive psychological and neurophysiological parameters and demonstrated distinct differences between the personalities on the basis of galvanic skin responses to emotionally laden words, EEG, average evoked responses, and sensory neurological examinations (6).

The purpose of the present case study is to add to the sparse world literature on multiple personality and to present the objective data collected on this patient. Only through the accumulation of such objective data on a series of such patients will a satisfactory understanding of multiple personality be forthcoming.

Case History

Faith, a 35-year-old white woman of rural Kentucky background, was admitted to hospital with the complaint of recurrent impulses to harm herself. These impulses had apparently led to seven suicide attempts and three psychiatric admissions to hospital in the past four years.

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She described a sense of someone within her mind trying to control her. She claimed to have no memory for any of the suicide attempts. In addition she had a much longer history of memory gaps dating back to childhood. These amnestic episodes ranged from lasting only several minutes to several weeks. They were reported by others to be often characterized by very unusual behaviour, e.g. she once attempted to attack and stab her husband and 5-year-old son without warning or provocation. Her most recent amnestic period included the entire preceding autumn, during which time she was reported to have been raped, involved in a burglary plot with her alleged rapists, jailed, and subsequently to have made her latest suicide attempt. She was always aware of an impending 'spell' because she would get a severe headache beginning in the left temporal area which would settle at the top of her head like a vice. Following an amnestic period the headache would be gone; however, she often reported a sense of bewilderment lasting from several hours to several days.

She also reported many medical problems. These included peptic ulcer disease requiring surgery in 1970 and 1973, and the occurrence of congenital anomalies among several of her children resulting in her sterilization by hysterectomy in 1971. On review of systems, she reported a positive past history for 'conversion' symptoms in the following spheres of function: *motor*—lump in throat with difficulty in swallowing, aphonia, waist-down paralysis, and muscular weakness; *perceptual*—auditory and visual hallucinations of a dramatic and sometimes clairvoyant nature, transitory blindness and deafness, visual blurring and migrating anaesthesias; *physiological*—anorexia, bloating, and dysmenorrhoea; *consciousness*—syncopal attacks, dizziness and numerous 'spells' of an amnestic-dissociative nature. Neurological examination revealed no abnormalities, and she had a normal electroencephalogram. During previous psychiatric admissions she had been diagnosed as suffering from schizophrenia and had been treated with various neuroleptics and antidepressants, and by one course of seven electroconvulsive treatments. Results of treatment had been uniformly ineffective.

Description of Personalities

Shortly after admission a hypnotic interview was conducted, during which one of the personalities spontaneously revealed herself and gave hints of the existence of other personalities. Since the patient proved to be a hypnotic subject of somnambulistic capabilities, hypnotic techniques were employed to explore the genesis and evolution of each personality. All historical data were whenever possible corroborated, without gross discrepancies emerging, by her mother, half-brother and husband. This included clear verification of the patient being liable to dissociative-amnestic states long before the use of hypnosis—in fact almost all her life.

Four distinct personalities were identified. A brief description of each follows.

Faith

This is the primary personality. She is also known as the 'little angel' by personality Alicia, a childhood nickname given the patient by her grandfather. She is described by others as being generally kind, loving, and helpful. She has difficulty in expressing emotion, particularly anger, and in dealing with criticism. She has only peripheral awareness of Alicia via occasional auditory hallucinations and a sense of evil within her. She has no knowledge of personalities Alicia-Faith or the Guardian Angel.

Alicia

This personality has taken the delusional identity of being a Satanic agent, sent by Satan to take over the body of Faith. She claims control over most of Faith's physiological functions and proudly assumes responsibility for 'rotting her guts' and producing deformed children. Present since the age of thirteen months, when Faith was often referred to in anger as the 'devil child', Alicia has gained in power and influence particularly over the last five years. During this time she has been able to take control completely for brief periods, especially during alcoholic intoxication, manifesting either assaultive or self-destructive behaviour.

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Alicia-Faith

This personality is known to Alicia as the 'coward' and sometimes as 'dummy'. The first of the alter personalities to split off, her function prior to age 25 was to absorb all physical and emotional pain. Since the death of the grandfather she has been completely under the influence of Alicia. She has, however, only peripheral awareness of Alicia and no knowledge of Faith or Guardian Angel.

Guardian Angel

This personality does not appear to have become as completely dissociated from the primary personality as the others. The last of the alter personalities to split off, it in many ways appears identical to the hypnotic trance personality. It first made its appearance following the grandfather's death at fundamentalist religious services, during which its identity was moulded by the congregation. It claims to be the protector of Faith, and to have the power to communicate directly with God and to foresee the future. It has complete awareness of all the personalities.

Treatment

During her initial days in hospital, before the diagnosis of multiple personality was made, Faith complained of a variety of physical ills and the fear of something terrible about to happen. Retrospectively, Alicia explained that Faith had signed into the hospital under her full name of Alicia-Faith. All of the hospital staff had been addressing her as Alicia. This seemed to reinforce Alicia's sense of control over Faith. Alicia stated that she had very nearly succeeded in destroying Faith on the psychiatric ward. At this point a strong hypnotic suggestion was given to Faith that she would be able to resist any evil influence. Because of the suicide risk, regular monitoring of Alicia's degree of influence was begun. The staff began addressing her as Faith. During the data collection period, lasting almost three weeks, Alicia gradually became weaker in influence and even feared at one point that she would be expelled from the body. This she attributed to the increased influence of the Guardian Angel while Faith was involved in religious activity on the ward. During the entire data collection period Faith was kept in the dark as to the nature of the information being gathered.

Historically, these patients have usually been treated with hypnosis to strengthen a healthy dominant personality or to attempt a fusion of the personalities (1, 7). Because of the emotional deficiencies in the character of Faith, the authors decided to attempt a personality fusion, with strong emphasis on the retraining of Faith in an integrated state to cope with a full range of emotional experience. A basic outline of her personality structure along with a treatment plan was presented to her.

Because of a low potential for suicide at this time, Faith was allowed a weekend Easter pass before treatment was begun. Upon return she stated that she had been miraculously cured and that there was no more of her 'other' personalities. She explained that on Good Friday she had been troubled with a terrible empty feeling within her. This lasted until she came out of church on Easter Sunday, when she saw a bright beam of light directed at her. This light at once made her feel whole. She felt as if during the service the minister had directed his remarks to her alone. Under hypnosis Alicia said she was so weak that she no longer had any influence. Alicia-Faith was no longer under her control and had merged with the 'little angel'. At this point it became possible to convince Alicia to give up her delusional identity and to agree to join Faith as the very important emotion of anger. Strong suggestions of fusion were given and the lengthy emotional retraining was begun.

Objective Study

Psychological measures

The Minnesota Multiphasic Personality Inventory (*MMPI*) was administered to each personality on different days. T-score results are given in Table I.

Each profile is consistent with a grossly psychotic clinical picture, the majority of clinical scales measuring well above the two standard deviation level. The validity scales consistently show an extreme elevation of the F scale. This alerts one to exercise restraint in overinterpretation of such a profile, since the

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TABLE I

T-score comparison

				1	2	3	4	5	6	7	8	9	10
	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
Faith ..	55	103	49	89	84	92	95	57	111	96	120	75	68
Guardian Angel	60	120	44	85	80	80	109	59	93	82	115	96	51
Alicia-Faith ..	66	120	48	95	100	87	100	41	105	92	120	65	56
Alicia ..	43	110	48	98	75	88	104	83	82	79	112	83	47

patient may be overstating her symptoms as a call for help. It should also be noted that MMPI scales have never been standardized for patients with multiple personality and that such patients have almost invariably been given a prior diagnosis of schizophrenia because of their unusual and oftentimes bizarre histories (8). In a previous paper, Brandsma and Ludwig (9) were able to show that elevations in certain clinical scales were significantly related to pathological responses to items reflecting these unusual experiences.

Despite general similarities of T-scores among personalities, certain differences, defined as one standard deviation from scores of the primary personality, may be noted. These differences between the personalities are remarkably consistent with the clinical data. Alicia is hypermasculine, with significant decreases in the Pa, Pt and Si scales. Alicia-Faith is the most feminine and most depressed of the personalities. The Guardian Angel scores high on the Ma scale reflecting its grandiosity and special clairvoyant powers, while scoring low on the Si scale.

The McDougall Scale of Emotions was administered to each personality and they were asked to respond as to the frequency with which each emotion was experienced. The results were consistent with the characteristics of each personality.

Neurological examination

Each personality was given a careful neurological examination. No abnormalities or differences were found other than a generalized 'hyperaesthesia' to all sensory modalities by Alicia-Faith.

Neurophysiological measures

Several physiological and neurophysiological measures were taken on each personality. All recordings were made during a single 3½-hour recording session. Each personality was recorded in the order shown in Table II. The specific measures taken included:

(1) *Electroencephalogram*
   (a) Alpha activity recorded with eyes open and with eyes closed from P_z to A_1.
   (b) Contingent negative variation (CNV) recorded from C_z to A_1 and averaged over eight trials.
   (c) Visual average evoked response (AER) recorded from C_z to A_1 and averaged over 32 trials for four different light intensities.
(2) *Electrocardiogram*—Heart rate and tachograph recording taken by means of gold cup electrodes placed at the subclavian area.
(3) *Galvanic skin response*—recorded from index and middle finger of right hand.
(4) *Blood pressure*—recorded from right arm using Arteriosonde.
(5) *Electromyogram*—recorded from submental position using a gold cup electrode with reference to the left earlobe (A_1).

The CNV records differed very little from each other. All were characterized by a low amplitude response. Likewise the GSR showed only changes that could be attributed to habituation to the chamber in which the subject

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was tested or else to a slight change in room temperature (3 degrees over the 3·5-hour session).

Comparisons of heart rate (beats/min), alpha activity (integrated 'bins'/min), muscle activity (integrated 'bins'/min), and blood pressure are shown for each personality in Table II. The numbers in the lower left-hand corner of each cell indicate percentage of change, using the primary awake personality ('Faith') as a baseline. Although changes can be observed, especially in alpha activity and EMG recordings, no definite conclusions can be drawn.

The average visual evoked responses (AER) for each personality were quite different from each other. Table III shows a summary of the latencies observed for the four different intensities of light (1, 2, 4 and 16 on a Grass PS-2 Photo-simulator) as well as the slope values for the P_1–N_1 and N_1—P_2 amplitude differences (where P_1, N_1 and P_2 are positive-negative-positive peaks expected at 100–140–200 milliseconds, respectively, following the stimulus). The slopes were calculated on the (assumed linear) function of the amplitude by varying intensity. A gross classification of AER types, according to criteria of Buchsbaum and co-workers (10, 11), is shown in Table III.

The major differences in the AERs were noted primarily in the latencies and amplitudes of the P_1, N_1 and P_2 components for intensities 1 and 16. Latency differences within a single personality and across personalities were much larger than expected. The observed differences in AER type were such as would be expected if four separate individuals had been tested.

TABLE II

Summary of physiologic and neurophysiologic parameters

Personality	Heart rate	Alpha activity		Muscle activity	Blood pressure
		Eyes open	Eyes closed		
Faith (awake) ..	110	1·7	27·1	7·4	122/77
Alicia	108	1·0	34·1	7·9	116/80
	98	*59*	*126*	*107*	*95/104*
Alicia-Faith ..	109	2·1	32·8	12·4	126/87
	98	*124*	*121*	*168*	*103/113*
Guardian Angel	98	36	35·8	8·1	112/78
	89	*212*	*132*	*109*	*92/101*

TABLE III

Summary of average evoked responses

Personality	Latency range (in msec following stimulus) Expected range 100–200	Slopes (in μvolts)		AER type
		P_1–N_1	N_1–P_2	
Faith (awake) ..	122–176 (Int. 1, 2, 4) 110–208 (Int. 16)	1·119	0·079	Slight augmenter
Alicia	114–182 (Int. 1, 2, 4) 96–162 (Int. 16)	1·140	−1·384	Moderate
Alicia-Faith	122–172 (Int. 2, 4) 102–188 (Int. 1, 16)	−2·740	−4·810	Reducer
Guardian Angel ..	114–178 (Int. 4, 16) 100–184 (Int. 1, 2)	−0·398	−1·211	Slight reducer

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Discussion

In the intensive study of this patient the authors have been impressed by the remarkable consistency of the clinical interviews and of all psychological parameters for each personality. Explanations of consciously faking or role playing these personalities flawlessly in such a psychologically unsophisticated subject appear quite inadequate. Hypnosis also appears insufficient to explain this phenomenon in that these patients usually have lifelong histories of dissociative states—long predating any use of hypnosis.

Examination of the neurophysiological data indicates that any conclusions concerning general neurophysiological mechanisms operating in such a case can only come after study of a much larger number of these patients. However, one finding is particularly noteworthy. The average evoked response (AER) types are indicative of the way one processes and adapts to an increasing intensity of stimulus. Whether one tends to dampen the expected rise in evoked response to an increasing intensity of stimulus ('reducer'), intensify the expected rise ('augmenter'), or leave it essentially unchanged ('moderate'), the AER type seems to be a relatively reliable and time-stable measurement (12). Slight fluctuations may occur in an individual over time or by consciously trying to alter one's perceptions, but these fluctuations appear to have an extremely limited range. In this subject, each personality had its own individual AER type, as if four different people had been tested. The greatest difference in AER type was between Faith, the emotionally constricted primary personality (an 'augmenter') and Alicia-Faith, the sensory-bombarded, fearful little girl (a 'reducer').

Although multiple personality represents a rare phenomenon, with about 200 cases reported, it is difficult to assess its actual frequency. This is largely because clinicians are unlikely to consider multiple personality in their differential diagnosis, because of the low probability of its occurrence. Even when the diagnosis has been made it is often late in the clinical course and after many prior psychiatric interventions. It is hoped, through the presentation of this case, together with the data obtained, that a modest contribution will be made to the growing knowledge base of this fascinating psychiatric disorder.

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