# A Study of Arsonists in a Special Security Hospital

by D. W. McKERRACHER and A. J. I. DACRE

During the course of a recent analysis of one year's male admissions to Rampton Hospital, and of male referrals to the psychology department, attempts were made to distinguish various offence patterns by means of psychological laboratory techniques. The results were largely disappointing, owing mainly to the great amount of overlap in the numerous crimes committed by the same patients. However, using a galvanic skin response (G.S.R.) conditioning procedure similar to that described by Tong (1958), it was noted that those patients who had committed arson revealed a normal distribution of conditioned responses (see Table I), whereas every other offence pattern was positively skewed towards the low conditionability end of the dimension (Esher, Orme, McKerracher, 1965). This suggested that further differentiation might be possible, and a full analysis was made of a number of case history factors in those patients who had, amongst other crimes, been charged with and found guilty of, committing arson. Comparison was made with the remaining patients, guilty of other crimes but not of arson.

### Methods

All male patients tested in the psychology department in the course of one calendar year were selected as a sample group. There were 177in all. Thirty of them had committed arson, but only 88 of the non-arsonists (Non-A), and twenty of the arsonists (A) had been subjected to the conditioning technique. This involved the use of a polygraph recorder, incorporating a G.S.R. channel, built by Theratronics Ltd. Conditioned responses consisted of pen deflections greater than I millimetre caused by changes in skin resistance following the sounding of a low frequency tone through a pair of padded earphones. The duration of this sound was half a second. The allowed latency for a response to occur was 10 seconds after the conditional stimulus (C.S.) alone was heard. No responses appearing just prior to the C.S. were considered, as it was thought these might be due to general alerting reactions in anticipation of something about to happen, perhaps linked to the better innate "time" sense of some patients (Orme, 1966). The unconditional stimulus (U.C.S.) employed was a puff of air ejected upon the eye at a pressure of 100 m.m. of mercury and commencing immediately after the C.S. had stopped. The time interval between the C.S. tones was thirty seconds.

All offences and relevant case history factors were recorded for each patient; it was found impossible to form discrete groups of offenders, owing to the fact that most of them had committed more than one crime. The arsonists were regarded as the experimental group, and the non-arsonists as the control group. No significant differences in age or intelligence were found between these groups.

# RESULTS

A full analysis of the data is provided in the accompanying tables, with the relevant statistically significant findings printed alongside. Briefly, the important differences between arsonists and non-arsonists are as follows:

1. There is a tendency for arsonists to display greater G.S.R. reactivity, and to give more conditioned responses than the non-arsonists.

2. Discounting the damage they caused by the fires themselves, more arsonists (A) were destructive to property in other ways (e.g. malicious damage) than non-arsonists (Non-A). It is possible, therefore, that arson is partly a channelling of aggression against property. There may be some special feeling involved in the destroying of property by fire that is specific to the method of destruction.

3. Fewer of the A group had histories of acts

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TABLE I

Comparison of Arsonists (A) and non-Arsonists (non-A) in various case features, and offences committed  $* = \cdot 05$  and  $\dagger = \cdot 01$  level of significance using Chi-Square test.

	Case features							
$\overline{(a)}$	G.S.R. Conditionability			A (Total $N = 20$ )		Non-A (Total 88)		
					Ν	%	Ν	%
	Low		••		7	(35)	39	(56)
	Medium	••	• •	••	10	(50)	29	(33)
	High	••	••	••	3	(15)	10	(11)
(b)	Symptomatology			A (Total N=30)		Non-A (Total N=147)		
					Ν	%	N	%
	Psychotic overlay				9	(30)	27	(18)
	Brain damaged			••	4	(13)	24	(16)
	Self-mutilation		• •		4	(13)	•	(o∙ó3)*
	Attempted suicide		••	••	7	(23)	4 8	(o·o5)†
	Absconding	••	••	••	13	(43)	52	(35)
(c)	Offences				A (Total N=30)		Non-A (Total $N = 147$ )	
					Ν	%	N	%
	Aggression to person				16	(53)	121	(82)†
	Aggression to property (oth	er th	an arso	n)	8	(27)	27	(18)
	Murder or Manslaughter			·	I	(3)	11	(8)
	Larceny				20	(67)	83	(57)
	Breaking and entering				11	(37)	41	(28)
	Car-stealing				3	(10)	10	(o·07)
	Train-wrecking	••		••	Ī	(3)	I	(o·006)
	Sexual offences (of any kine	d)	••	••	9	(30)	82	(56)†
					A (Total $N=9$ )		Non-A (Total N=82)	
(d)	Sex offences considered separa	ately	••	••	Ν	%	N	%
	Heterosex only		••	• •	7	(78)	56	(68)
	Homosex only			••	2	(22)	ĭ8	(22)
	Hetero and Homosex				ο	(o)	8	(10)
	Aggressive heterosex		••	• •	I	(11)	41	(50)*
	Aggressive homosex				ο	(o)	-8	(10)
	Aggressive hetero and hom	losex	ual offe	ences	ο	(o)	4	<b>(</b> 5)

of interpersonal aggression expressed physically. (53 per cent. compared with 82 per cent.)

4. Fewer arsonists committed sexual offences. (30 per cent. compared with 56 per cent.)

5. If arsonists *did* commit a sexual offence, it was seldom an aggressive one. (11 per cent. compared with 50 per cent.)

6. The bulk of their crimes were heterosexual, and there was no tendency to perpetrate more homosexual offences than in the Non-A group.

7. More arsonists betrayed suicidal inclinations than non-arsonists.

8. A greater number of arsonists committed acts of self-wounding than non-arsonists.

9. More arsonists had psychotic features

recorded in their histories, though the percentage difference did not reach statistically significant levels.

## DISCUSSION

The distinct tendency for arsonists to mutilate themselves more often than other patients is conduct that is more usual of disturbed female offenders in this hospital (McKerracher, Street, Segal, 1966). That they also have a more frequent history of attempted suicide suggests that they are emotionally less stable than the non-arsonists in a psychotic sense. Presumably they are more disposed to develop depression.

It is interesting that there is only an even

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chance of an arsonist attacking another person, whereas four out of five non-arsonists have such a history prior to admission at Rampton. When this relative lack of overt physical aggression towards the person is considered alongside their greater generalized destructiveness towards property (apart from the arson itself), the problem of motivation becomes acute. It could be argued that arson is itself an aggressive act, involving often spiteful feelings and the desire for revenge; but in the case of a man who burns down a factory because he is angry with his foreman it cannot be held that his incendiarism is a simple aggressive reaction. A punch to the nose would be a more direct solution if this were so. This latter course of action is precisely the form of primitive behaviour expected from the Non-A group four times out of five. Fewer of the A group were inclined to react directly in this manner (see Table I(c)). The arousing of pathological sexual excitement is another popular explanation of fire-raising, but again the trend in this sample was for less direct sexual expression of feelings to have taken place (see Table I(c)). Certain inferences can be drawn from these facts.

If it is hypothesized that the impulse to commit arson is related (a) to some aspect of suppressed aggressive drive, where direct physical expression is inhibited, and the 'displacement' activity of fire-raising substituted; or (b) to some form of sexual drive (symbolic catharsis ---in behavioural terms the abnormal development of a sexual reaction to the conditional stimuli supplied by flames), then the fact that arsonists were generally less likely to seek more simple and direct expurgation of their organic tensions becomes very significant. Arson could be conceived as the sublimating of an internally blocked drive. It is possible that the kind of arson offenders who come to Rampton are mainly the passive and inadequate individuals who are less capable of inter-acting at an emotional level with other people and seek their release from tension by fire-raising. There is also a strong chance that arsonists will be severely disturbed emotionally, if the higher attempted suicide rate, more frequent self-mutilation, and increased incidence of psychotic features are accepted as valid indicators of this.

It is important to stress that such conclusions are based on a relatively small number of subnormal arsonists, and do not apply to all arsonists. Rampton patients are a highly selective group, as cases of behavioural disorder have to be very severe before they are admitted to a special security hospital. Many arsonists go to prison, and it is only if there is a question of mental disorder that hospitalization of any kind is considered. Consequently, arsonists coming to Rampton have already been screened psychiatrically and it is only to be expected that many abnormal personality features will be present in their case histories. The interesting thing is that when these patients are compared with non-arsonist patients who have been similarly screened, the differences quoted in this paper emerge.

It might be asserted that the fire-raising of Rampton patients was incidental to their basic sociopathic inclinations, and was not necessarily a symptom of a discrete type of mental disorder, or of an inadequate personality structure.

To some extent it is possible to counter such an argument, since it has been shown that arson offenders have more clinically recognizable psychological symptoms than non-arsonists. From this it can be deduced that patients admitted to Rampton with a history of arson (amongst other offences) are likely to present personality problems that are somewhat different from those of patients with no history of arson. This implies that incendiarism is a symptom of an underlying mental disorder which is not clearly related to psychopathic disturbance.

### SUMMARY

A one year sample of male patients referred to the psychology department of a special security hospital, was divided into two groups: those who had committed arson, and those who had not. Compared with the control group, the arsonists showed a higher conditioning rate. More of them had a psychotic overlay and a history of attempted suicide. A greater percentage was prone to self-mutilation. Fewer of them had committed sexual offences, and fewer of them had displayed direct physical aggression against the person. It is suggested that arsonists who are sent to Rampton are likely to be

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emotionally more labile than other Rampton patients. They also display a greater variety of psychiatric symptoms than is found among the other subnormal and psychopathic offenders in the hospital.

#### References

- ESHER, F. J. S., ORME, J. E., and MCKERRACHER, D. W. (1965). "Replicatory studies of two psycho-physiological techniques of assessing mentally subnormal patients." *J. ment. Sub.*, 11, Part 2, 93–98.
- LEWIS, N. D. C., and YARNELL, M. (1951). Pathological fre setting. N.Y. Coolidge Foundation.
- McKerracher, D. W., Street, D. R. K., and Segal, L. J. (1966). "A comparison of the behaviour problems presented by male and female subnormal offenders." Brit. J. Psychiat., 112, 891-897.
- MURPHY, I. C. (1961). "Stress reactivity and anti-social aggression." Doctoral dissertation, Sheffield Univ. Library.
- ORME, J. E. (1966). "Time estimation and the nosology of schizophrenia." Brit. J. Psychiat., 112, No. 482, 37-39.
- TONG, J. E. (1958). "Stress reactivity and its relation to disordered (delinquent) behaviour in mental defective subjects." Doctoral dissertation, Sheffield Univ. Library.

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