



**THE PREVALENCE OF RECENT ILLICIT DRUG USE:
DOES HOUSING MATTER?**

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Abstract

The relationship between residential occupancy and crime has previously been examined in the Australian context. The research has found that living in public housing does not *per se* increase offending once one accounts for the fact that offenders are generally more socially deprived and, as such, are more likely to be living in public housing. What has not been researched in Australia is whether there is any link between housing status and illicit drug use. This paper takes this up. The group being examined is police detainees who were interviewed through the Drug Use Monitoring in Australia (DUMA) project. DUMA collects data on drug use behaviour, criminal histories, and basic demographic data including usual place of residence. In isolation, differences in drug use between those living in private and public housing are statistically significant, but once a variety of social and other factors are controlled for, there is no significant effect of public housing on drug use. The results are thus consistent with a housing allocation position in which the co-incidence of more extensive drug use in public housing areas simply reflects the fact that more drug-users live there.

Literature Review

Much research has been done on the association between public housing and crime levels. In contrast, drug use and its relationship to public housing has not been as well researched. Using Census postcode data to measure public housing levels, Matka (1997) looked into the effects that the level of public housing has on police recorded crime rates within Sydney postcodes. It also looked into whether or not different kinds of public housing exerted differential effects. Matka argued that people in public housing were more likely to commit crime in the first instance due to their lower socio-economic status (Matka 1997:8). Having controlled for this, the percentage of public renters and the percentage of public housing dwellings in an area exerted a small but statistically significant effect on the offence rates. The change in the model was at most three percent. The *type* of public housing also appeared to make a small (less than a one percent change in the model) but statistically significant effect on assault and robbery rates.

Following on from this, Weatherburn and Lind (2001: 147) suggested that any excess of offending in public housing areas not explained by socio-economic factors might be due to the proximity of existing juvenile offenders to those that are susceptible. That is, through a process of peer pressure, individuals who would not normally participate in criminal behaviour may be tempted to do so if placed in a situation where deviance is the norm. The authors suggest that the physical layout of public housing areas, with more dense living conditions, might be a facilitating factor.

In a separate study, “Hotbeds of Crime?” Weatherburn *et al* (1999) examined two hypotheses to try to explain the higher crime rates in areas with an over-representation of public housing. A design hypothesis posits that ‘public housing design influences crime by controlling the supply of opportunities for offending’ (Weatherburn *et al* 1999:256). Alternatively, an allocation hypothesis posits that ‘public housing estates experience persistent crime problems simply because crime prone individuals are there’ (Weatherburn *et al* 1999:256). Results supported the allocation hypothesis, consistent with Matka's (1997) model.

While the Australian literature has looked into crime and public housing, it has not fully examined the link between drug use and public housing. Some work has been done, however, in the United States. The National Institute of Justice (1994) examined drugs and crime in three US cities - albeit focusing on ‘rates of drug and other serious offending’ rather than actual drug *use* (NIJ 1994: iii). Nevertheless, it found that drug and violent offending in public housing were high relative to other areas. Interestingly, rates of property offending were lower – possibly, it suggests, because fewer property offences are reported to the police, or because there is simply less to steal.

The methodology of the current study differs from that in previous research, which has essentially assumed that any excess of crime in public housing areas is because local public housing tenants are committing it. In this study, the focal point is not the residential area itself, but residential status of the drug users themselves. Where they actually use drugs (or indeed commit crime) is not the issue. Rather, it is whether those living in public housing areas are more likely or not to use illicit drugs once account is taken of socio-economic factors that link both to residential status and drug use.

The DUMA Project

The data used for this paper are from the Drug Use Monitoring in Australia (DUMA) project. The DUMA project seeks to measure recent drug use among people apprehended by police. The data were collected in four sites in three jurisdictions. These sites are Bankstown and Parramatta in New South Wales, Southport in Queensland and East Perth in Western Australia. The DUMA program is a partnership between the Commonwealth Attorney-Generals’ Department, the AIC, state police services and local researchers (Makkai & McGregor 2001).

Data are collected for DUMA on a quarterly basis by locally engaged researchers. Staff conduct interviews with detainees who have been detained within the previous 48 hours and are being held in custody. The sample is not a random sample of all detainees. Participation in the research is completely voluntary and detainees have the right to decline to be interviewed and to stop the interview at any time. They can also refuse to answer any question they are asked. Police have the authority to stop people being interviewed if they believe a detainee might be a danger to the interviewer. In addition, if a detainee is too upset, tired, ill, or intoxicated to be interviewed the person is not approached by interviewing staff.

As well as collecting data on recent drug use, the DUMA questionnaire also covers basic demographic data, treatment history, drug use history, drug market information, and criminal history. Other data collected includes data from police records, including charge information, suburb of offence and adult/ juvenile status. All information provided is completely confidential. No names, addresses, or other identifying information about the detainee is recorded. On completion of the questionnaire, detainees are asked if he/ she is willing to supply a urine sample. Once collected, the urine sample is sent to an independent laboratory and is tested for six classes of drugs. The sample is then destroyed.

The response rates for the DUMA project are quite high. Of the people that are approached for an interview, around 80 percent agree. Of the people interviewed around 70 percent give a urine sample (Makkai & McGregor 2001). This means that around 56 percent of all available detainees participate in the questionnaire and give a urine sample.

DUMA data have limitations, as they do not relate to a random sample of all detainees. DUMA interviewers only approach those detainees who have been in custody less than 48 hours. In addition, DUMA interviews only take place in the police station or watchhouse. DUMA interviewers miss those people who the police do not bring into the station or watchhouse for processing – eg, people ‘cautioned’ by police on the street.

The analyses presented below uses DUMA data collected during 1999, 2000 and 2001 from all sites. Data from Southport and East Perth includes 12 quarters of data, from the beginning of 1999 to the end of 2001. Data from Bankstown and Parramatta includes data from 10 quarters – mid 1999 to the end of 2001. For the most part the data are aggregated across sites to give a larger sample size. However, breakdowns by site are included where appropriate. Significance tests are based on a 95 percent confidence interval.

Methodology

The DUMA questionnaire asks two questions relating to residential status. The first asks where respondents have lived in the past 30 days, three possible codes being 1) in a home that you own or rent; 2) in someone else’s house or apartment; or 3) some other household location. If answers are affirmative to any of these, respondents are asked the second question: namely, if they live in [state specific terminology] public housing. Available responses are ‘yes’, ‘no’ or ‘don’t know’. Detainees are not asked if they live in public housing if they say that they lived in a shelter or emergency housing, prison, a halfway house, a treatment program or on the street. Four hundred and sixty respondents (9%) said they had been in these types of accommodation and have been excluded from the analyses as public housing status cannot be assured. People who answered ‘don’t know’ to living in public housing (70 respondents, 1%) have also been excluded. Juveniles are interviewed for the DUMA project in the two Sydney sites. Due to small numbers, they have been excluded from the analyses. Adults are defined as 18 years or older in NSW and WA and 17 years or older in Queensland.

The number of adult detainees who said they lived in ‘public housing’ during the past 30 days was 966, while ‘not in public housing’ was 3643 (Table 1).

Table 1: Percent in Private/ Public Housing by site

| | N | Percent |
|------------------------|-------------|-------------|
| Southport | | |
| Private Housing | 1324 | 93.8 |
| Public Housing | 87 | 6.2 |
| Bankstown | | |
| Private Housing | 637 | 76.8 |
| Public Housing | 192 | 23.2 |
| Parramatta | | |
| Private Housing | 544 | 67.4 |
| Public Housing | 263 | 32.6 |
| East Perth | | |
| Private Housing | 1138 | 72.9 |
| Public Housing | 424 | 27.1 |
| Total | | |
| Private Housing | 3643 | 79.0 |
| Public Housing | 966 | 21.0 |

As can also be seen in table 1, there are differences between the sites. Living in public housing was most common in Parramatta (33%), East Perth (27%), and Bankstown (23%). Southport differs with only six percent reporting living in public housing. This is probably due to the nature of the Southport site, which is situated on the Gold Coast in Queensland, and has a transient population with large numbers of tourists and hence, less public housing (Australian 1996 Census Data).

Offending Behaviour

In conjunction with the questionnaire, the DUMA project collects data on the offences for which the respondent was detained. The three most serious offences for each detainee are recorded. The Australian Bureau of Statistics’ Australian Standard Offence Classification (Australian Bureau of Statistics: 1997) scheme is used to allocate charges to eight categories – violent, property, drug offences, drink driving, traffic, disorder, breaches, and other. Disorder offences include public order offences, while breaches include offences against justice procedures, offences against government security, and offences against government operations. For this analyses, detainees are assigned to the most serious offence category of the three current charges. The hierarchy from most serious to least serious is: violent, property, drug offences, drink driving, traffic, disorder, breaches, and other. Thus, if a person has been charged with a property offence and a violent offence, the violent offence will take precedence.

Forty-nine percent of detainees recorded one offence. Twenty-four percent recorded two offences and 27 percent recorded three offences. Detainees in public housing were more likely to be charged with only one offence and less likely to be charged with three offences than other detainees.

Table 2 shows offence category by public housing status. Detainees who reported living in public housing were more likely to be brought into police custody for violent offences (21% were compared to 17% of other detainees), or property offences (34% as against 30%) The differences between the groups for both categories of offence are statistically significant.

Table 2: Offending behaviour by public housing status

| | <u>Private Housing</u> | | <u>Public Housing</u> | |
|-----------------------------|------------------------|---------|-----------------------|---------|
| | Number | Percent | Number | Percent |
| Most Serious Offence | | | | |
| Violent* | 604 | 16.9 | 197 | 20.8 |
| Property* | 1063 | 29.7 | 318 | 33.6 |
| Drugs* | 342 | 9.6 | 54 | 5.7 |
| Drink-driving* | 296 | 8.3 | 44 | 4.6 |
| Traffic* | 490 | 13.7 | 88 | 9.3 |
| Disorder | 203 | 5.7 | 45 | 4.8 |
| Breaches* | 426 | 11.9 | 174 | 18.4 |
| Other* | 155 | 4.3 | 27 | 2.9 |
| Offending History | | | | |
| Been arrested* | 1730 | 48.2 | 572 | 61.0 |
| Been in prison* | 596 | 16.4 | 252 | 26.1 |

*Statistical different between groups, $p < 0.05$.

There are also differences between privately and publicly housed detainees who self report that they had been arrested or in prison during the 12 months before their current arrest. Of detainees in public housing, 61 per cent said they had been arrested during the past 12 months, and 26% said they had been in prison; the figures for those in private housing were 48% and 16% respectively – on both cases a statistically significant difference. .

Violent, property and drug offenders are most often associated with drug use. Makkai & McGregor (2002) found that detainees who are brought into custody for a violent, property, or drug offence are very likely to test positive to illicit drugs (between 70 and 84 percent of adult male detainees). For this reason, the analyses will only include those detainees that have been detained for a drug, property, or violent offence as their most serious charge.

Socio-Demographic Profile

The current literature suggests that people in public housing are more likely to commit crime due to their socio-economic status (Matka 1997). Measures of socio-economic status measured by Matka include (but are not limited to) sex, age, educational level, low income, unemployment, and marital status

Considering this, the DUMA data were looked at to see how those in public housing differed from those in private housing in terms of a number of demographic features (table 3). The public housing group was characterised, first, by more female detainees (25% were female as against 17% in the private housing group). Other differences were a lower educational level (74% had less than ten years of schooling compared to 59%), and marital status (6% in public housing were married, compared to 10% of others). The public housing group, compared to others, were also more likely to have been unemployed in the last 30 days (51%, 46%); and as a corollary fewer had been employed full-time in that period (13% as against 23%).

Table 3: Socio-demographic profile by residential status

| | <u>Private Housing</u> | | <u>Public Housing</u> | |
|----------------------------------|------------------------|---------|-----------------------|---------|
| | Number | Percent | Number | Percent |
| Male* | 1673 | 83.3 | 428 | 75.2 |
| Female* | 335 | 16.7 | 141 | 24.8 |
| Less than 10 years of schooling* | 1191 | 59.3 | 423 | 74.3 |
| Married* | 195 | 9.7 | 34 | 6.0 |
| Working full-time* | 163 | 22.7 | 26 | 13.2 |
| Unemployed* | 329 | 45.9 | 101 | 51.2 |

*Statistical different between groups, $p < 0.05$.

Slightly different from employment status are self-reported sources of income (table 4). Seventy-eight percent of detainees living in public housing reported that they had received some form of government benefits during the past 30 days, as against 63 percent of detainees in private housing. The reverse of this was that fewer of the public housing group had had received money from full time employment during the past 30 days (12% as against 29%), while more of them said they had received income from shoplifting or from other illegal activities such as burglary and robbery. The public housing detainees, however, were less likely to report income from illegal drugs.

Table 4: Sources of income past 30 days

| | <u>Private Housing</u> | | <u>Public Housing</u> | |
|-----------------------|------------------------|---------|-----------------------|---------|
| | Number | Percent | Number | Percent |
| Family/ friends | 529 | 26.3 | 161 | 28.3 |
| Welfare/ government* | 1259 | 62.7 | 446 | 78.4 |
| Full-time job* | 510 | 25.4 | 63 | 11.1 |
| Part-time job* | 467 | 23.2 | 83 | 14.6 |
| Prostitution | 41 | 2.0 | 13 | 2.3 |
| Shoplifting* | 72 | 10.0 | 33 | 16.8 |
| Illegal drugs* | 209 | 10.4 | 44 | 7.7 |
| Other illegal things* | 406 | 20.2 | 145 | 25.5 |

*Statistical different between groups, $p < 0.05$.

Urinalysis Results

As mentioned previously, around 70 percent of detainees interviewed give a urine sample. This section reports only on those detainees who gave a urine sample and had either a violent, property or drug offence as their most serious charge. . Of these, 1,495 were in private housing, and 417 in public housing. .

The urine is initially screened for the drug classes: amphetamines, benzodiazepines, cannabis, cocaine, and opiates. If the urine tests positive for amphetamines, opiates or benzodiazepines confirmatory tests are then conducted to try to ascertain illegal use. For the purposes of this paper, the results from the screening process will be used. For further information on drug detection testing, refer to Makkai (2000).

Amphetamines, opiates, and cocaine can be detected in urine between two and four days after use. For this reason a positive result is a reliable measure of recent drug use. Cannabis can be detected in urine for up to 30 days after the drug has been taken. Consequently, cannabis use will not be examined in this paper. Similarly, benzodiazepines can be detected up to 14 days after use, thus benzodiazepines have been excluded from the analysis also.

Detainees living in public housing tested positive to opiates and cocaine more frequently than detainees in private housing. Both differences were statistically significant. Detainees in public housing also more often tested positive to any drug (54% did so) than the other detainees (46%) – table 5.

Multiple drug use is defined as testing positive to two or all of the drug classes’ opiates, amphetamines, and cocaine. Ten percent of detainees living in public housing tested positive to multiple drug use, compared to 8 percent of other detainees – not a statistically significant difference. It indicates that while detainees in public housing were more likely to test positive to individual drugs, they are not any more likely test positive to multiple drug use.

Table 5: Percent Positive, by drug

| | <u>Private housing</u> | | <u>Public Housing</u> | |
|------------------|------------------------|---------|-----------------------|---------|
| | Number | Percent | Number | Percent |
| Opiates* | 406 | 27.2 | 144 | 34.5 |
| Amphetamines | 357 | 23.9 | 97 | 23.3 |
| Cocaine* | 46 | 3.1 | 29 | 7.0 |
| Any drug* | 680 | 45.5 | 226 | 54.2 |
| Multiple drugs | 122 | 8.2 | 42 | 10.0 |
| Total (N) | (1495) | | (417) | |

*Statistical different between groups, $p < 0.05$.

The DUMA data have consistently shown that detainees in Sydney (Bankstown and Parramatta) have been more likely to test positive for opiates and cocaine, while those in East Perth are much more likely to test positive for amphetamines (see Makkai and McGregor 2002). These differences largely persisted, regardless of housing status (Table 6).

Table 6: Percent Positive, by Drug, by Site

| | <u>Southport</u> | | <u>Bankstown</u> | | <u>Parramatta</u> | | <u>East Perth</u> | |
|------------------|------------------|----------------|------------------|----------------|-------------------|----------------|-------------------|----------------|
| | Private housing | Public Housing | Private housing | Public Housing | Private housing | Public Housing | Private housing | Public Housing |
| Opiates | 18.8 | 31.0 | 42.4 | 39.1 | 30.9 | 40.7* | 25.0 | 27.5 |
| Amphetamines | 21.9 | 16.7 | 12.1 | 11.5 | 17.8 | 23.0 | 38.7 | 32.0 |
| Cocaine | 0.9 | 0.0 | 7.6 | 18.4* | 6.2 | 8.9 | 0.7 | 0.7 |
| Any drug | 37.5 | 47.6 | 51.7 | 52.9 | 42.5 | 58.5* | 53.4 | 52.9 |
| Multiple drugs | 4.1 | 0.0 | 9.0 | 16.1 | 11.6 | 12.6 | 10.8 | 7.2 |
| Total (N) | (538) | (42) | (290) | (87) | (259) | (135) | (408) | (153) |

*Statistical different between private and public housing, $p < 0.05$.

Parramatta showed the strongest association between testing positive to drugs and living in public housing. Detainees in public housing here were more likely to test positive to all individual drug classes than others, although only differences in opiates and ‘any drug’ were statistically significant.

Bankstown was similar to Parramatta in that detainees in public housing were more likely to test positive to any drug and multiple drugs, but the differences were not as pronounced. Publicly housed detainees in Bankstown were also significantly more likely to test positive to cocaine. East Perth was different again, in that detainees in public housing were less likely to test positive to most drugs (with the exception of opiates) than other detainees, although the differences were small.

As seen earlier in table 1, the Southport site was singular in having only six percent (87 people) saying they lived in public housing. In Southport, detainees in public housing were more likely to test positive to opiates (31%) than others (19%) – although the difference was not statistically significant probably due to small sample size. Publicly housed detainees from Southport were also more likely to test positive to any drug, but again the difference was not statistically robust.

Predictors of Recent Drug Use Among DUMA Detainees

The hypothesis that we are testing in this paper is whether housing status has a significant direct effect upon illicit drug use. In the previous section, bivariate analyses have shown that public and private housing detainees differ with respect to a number of characteristics that bear on socio-economic position (eg, employment status). . Furthermore, recent illicit drug use also seems to vary by housing status. Australian research by Matka (1997) found a small but direct effect of housing status on crime. However, Matka (1997) and others (Chiricos 1987, Devery 1991) have shown that housing status is associated with a range of socio-demographic actors. These factors included low income, unemployment, juveniles, single parent families, stability, aboriginality, dwelling density, and non-qualification (Matka 1997:14). As a result, Weatherburn *et al* (1999) concluded in their research on housing status and crime that it was not housing status *per se* that made the major contribution to crime rates but the aggregation of people with similar characteristics in particular types of housing that explained varying crime rates.

Thus to effectively test the hypothesis that housing status has a significant affect on the prevalence of drug use it is important that those factors that are associated with housing status are controlled for in the analyses. As our dependent variables are dichotomous logistic regression models were fitted to the data (table 7). In addition to socio-demographic factors being associated directly with housing status research on recent drug use amongst detainees has shown that indicators of criminal offending, such as prior arrest and imprisonment history, are also important (Makkai 2001). Different drugs are often associated with different offending behaviour. Opiates are most often associated with property offending and amphetamines and cocaine are associated with violent offending. Given that, for example, property offenders are more likely to test positive to opiates (Makkai & McGregor 2002) the model controls for offending behaviour. Although we are not theoretically interested in differences across sites, the earlier analyses indicate differences between sites are significant so the model also controls for this factor.

When public housing is entered into the model on its own it is a significant predictor of recent use of opiates, cocaine and any drug use. It was not a predictor for amphetamine use or multiple drug use. This is what we would expect given the bivariate analyses. However when the socio-demographic factors and the criminal offending variables are then entered into the model public housing is no longer a significant factor. Unlike Matka’s analyses (which were at the aggregated level) there is not even a weak but statistically significant effect for housing in this sample.

Our bivariate analyses show that certain groups are over-represented in public housing. When we include all these factors into a logistic regression to predict housing status the socio-demographic factors are significant – females, those on government benefits, those with poorer education, are all significant predictors of housing status. The analysis also shows criminal history makes a significant contribution. Those who have spent time in prison in the past 12 months are significantly more likely to be in public housing. Interestingly, being arrested in the previous 12 months was not a significant predictor for public housing. The model also includes a measure of the current most serious charge for which the person has been detained. Those with a violent offence are significantly more likely to be in public housing than those charged with a property offence or a drug offence. This model supports the ‘allocation’ hypothesis that people with a lower socio-demographic status are more likely to be in public housing.

Table 7. Logistic regression predicting recent drug use^a

| | Opiates | | | Amphetamines | | | Cocaine | | | Any drug use | | | Multiple drug use | | |
|---|---------|----------------|----------------|--------------|----------------|----------------|---------|----------------|----------------|--------------|----------------|----------------|-------------------|----------------|----------------|
| | Odds | 95% (CI) lower | 95% (CI) upper | Odds | 95% (CI) lower | 95% (CI) upper | Odds | 95% (CI) lower | 95% (CI) upper | Odds | 95% (CI) lower | 95% (CI) upper | Odds | 95% (CI) lower | 95% (CI) upper |
| Public Housing | 1.09 | (0.84) | (1.42) | 0.84 | (0.63) | (1.12) | 1.68 | (0.98) | (2.86) | 1.12 | (0.88) | (1.43) | 0.86 | (0.58) | (1.27) |
| <i>Socio-demographic variables</i> | | | | | | | | | | | | | | | |
| Female | 1.54* | (1.18) | (2.02) | 1.18 | (0.89) | (1.57) | 1.54 | (0.86) | (2.77) | 1.45* | (1.12) | (1.87) | 1.74* | (1.19) | (2.55) |
| Receiving government benefits | 1.86* | (1.44) | (2.40) | 1.20 | (0.93) | (1.56) | 1.08 | (0.62) | (1.89) | 1.62* | (1.31) | (2.02) | 1.46 | (0.97) | (2.19) |
| Completed 10 years of education or less | 0.52* | (0.39) | (0.70) | 1.52* | (1.16) | (1.98) | 3.55* | (2.11) | (5.98) | 0.92 | (0.72) | (1.18) | 1.48* | (1.01) | (2.18) |
| <i>Criminal offending</i> | | | | | | | | | | | | | | | |
| Property offence | 1.86* | (1.44) | (2.41) | 1.49* | (1.14) | (1.95) | 1.49 | (0.78) | (2.87) | 1.96* | (1.56) | (2.45) | 1.54* | (1.02) | (2.34) |
| Drug offence | 1.14 | (0.78) | (1.65) | 2.01* | (1.41) | (2.85) | 1.63 | (0.66) | (4.01) | 1.76* | (1.29) | (2.41) | 1.56 | (0.88) | (2.78) |
| Been arrested | 1.95* | (1.55) | (2.47) | 1.37* | (1.08) | (1.73) | 1.90* | (1.07) | (3.38) | 1.97* | (1.61) | (2.42) | 1.72* | (1.18) | (2.50) |
| Been in prison | 1.50* | (1.15) | (1.95) | 1.06 | (0.80) | (1.40) | 1.07 | (0.60) | (1.94) | 1.43* | (1.11) | (1.83) | 1.22 | (0.82) | (1.80) |
| Nagelkerke pseudo R-square | 0.17 | | | 0.10 | | | 0.23 | | | 0.14 | | | 0.08 | | |
| (n) | (1884) | | | (1884) | | | (1884) | | | (1884) | | | (1884) | | |

*Statistical different between groups, $p < 0.05$. ^aModel controls for site location

Conclusion

The paper set out to test the hypothesis that public housing exerts a statistically significant effect on rates of drug use among police detainees who were charged with a violent, property or drug offence. Initial bi-variate analysis showed that these two groups of publicly and privately housed detainees appeared to be quite different. The socio-demographic profile of the two groups was significantly different across a range of measures. Detainees in public housing were statistically more likely to be involved in serious crime, such as violent and property offending. They were also more likely to test positive to hard drugs such as opiates and cocaine. Fifty-four percent and 46 percent of detainees in public and private housing respectively tested positive to opiates, amphetamines, or cocaine.

However, when the multivariate model controls for social and crime factors there is no direct significant effect of housing status on recent drug use amongst this sample. Given that other research on housing status and crime has argued that the important factor seems to be the 'allocation' of particular groups of people to different stocks of housing this hypothesis was also tested. The logistic regression model showed that there significant social and crime differences between those in public and private housing. These data support the contention that it is not public housing that is the important factor but the 'allocation' of people to different stocks of housing.

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