

Conflict & Violence in Pubs: Design Issues

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Section 1

Using this report Any discussion of design and its effects on behaviour must, necessarily, involve the use of some technical terms and concepts. We have attempted to minimise the use of such terms and to give explanations where their use is unavoidable. For some purposes, however, readers may wish to skip the more theoretical treatments and focus solely on the practical implications for pub design. For this purpose we have included non-technical summaries at the end of each section and a final summary at the end of the report. These may also serve as handy references when considering refurbishment of specific houses or where there is a perceived need to alter a pub's design in order to reduce existing levels of conflict and violence.

Section 2

Introduction Problems of conflict, aggression and violence in pubs will not be eradicated through improved design and lay-out. It is unreasonable to suppose that any measures, however drastic, will put an end to the timeless macho rituals, arguments and occasional fights which have been associated with drinking ever since the first taverns and ale-houses opened their doors to thirsty customers. Equally, however, it would be absurd to suggest that the design of a pub has no influence on the mood and behaviour of people who spend time in it. We are all deeply affected by the environments in which we live and work, and also by those in which we spend our leisure.

Our research suggests that between 15% and 20% of all aggression and violence in pubs can be directly attributed to factors such as:

- problems of surveillance due to inappropriate lay-out
- frustration caused by restricted flow patterns
- overly energetic decor - complexity and colour schemes
- inappropriate lighting
- discomfort due to noise, heat, furnishings etc.

In some pubs, the influence of these factors is very much above the average, contributing strongly to levels of conflict and violence. In other pubs, however, design features seem to have little or no effect on the conduct of customers. Even so, the resolution of such faults is likely to result in decreases in conflict across the range of pubs and, more importantly, produce very significant changes in particular houses.

It is clear, however, that design effects interact with such factors as management skills and style, service standards, customer profile etc. An experienced and effective manager may be able to overcome potential problems arising from faulty design because of the skills he employs. A less effective manager may not be as sensitive to such issues and, as a result, experience recurring difficulties with aggressive customers. A much more substantial decrease in levels of violence and aggression, therefore, will be achieved if attention to design is coupled with measures aimed at improving manager selection and training and reducing other factors which might contribute to higher levels of aggression.

Because design effects interact with other variables, it is clear that there can never be a single 'formula' which can be applied to all pubs. In particular, the trading style and customer profile of a given pub will dictate the range of design criteria which should be employed and the psychological issues which are most relevant to consider. The issue is further complicated by the fact that even within a narrow customer profile (defined in terms of age, socio-economic class, lifestyle etc.) there will be considerable differences in individual responses to features in the built environment. People

differ in their tolerance of frustration and in their reactions to noise levels, lighting, colour schemes and overall activity levels. They also vary in terms of their proneness to mood changes and aggressive responses irrespective of immediate situational influences.

The complexity of the relationship between design and aggression has prompted, in recent years, a tendency for architects and designers to 'play safe'. This is particularly noticeable in the use of colour in pub refurbishment schemes. Deep red colours are largely excluded, for sound, psychological reasons, but are often replaced with schemes lacking intensity and saturation of any hues at all. Such 'solutions' reduce the potential for over-arousal of customers but introduce the distinct possibility of under-arousal and psychological dissatisfaction in some people. Similarly, the response to problems of surveillance and monitoring of behaviour has often been to remove walls and partitions and create one-bar environments. While such arrangements allow the manager and his staff to detect potentially troublesome behaviours at an early stage, they introduce the risk of behavioural contagion and run counter to the desire of customers for a sense of physical and social enclosure.

This report aims to establish a set of basic design criteria for minimising the risks of aggression arising from environmental and situational sources. It considers the risks implicit in certain types of design modification and aims to establish the most appropriate point of balance between often competing requirements and influences. The report also aims to identify the most appropriate ways of tailoring the environment according to the types of activity and clientele for which it caters. The major conclusions are drawn from existing psychological theory and research and from our own fieldwork.

Summary 2 Between 15% and 20% of violence in pubs may be attributable to a range of design factors.

The impact of design on violence varies from pub to pub. It might be quite irrelevant in some but of much more significance in others.

Design problems might only become apparent after a change of management. Experienced and effective managers can often overcome design problems while for less effective managers these additional problems lead to a lack of coping.

There is no single design formula which can be applied to all pubs. While there are certain principles which need to be considered in all cases, the trading style, typical clientele, location and basic physical features of the pub will dictate different treatments.

"Playing safe", in design terms, is not always a satisfactory solution. By removing all the features which have the potential, in some circumstances, to increase aggressive feelings, we may end up with

interiors which are so bland and unappealing that nobody wants to spend any time in them.

This report identifies the critical design issues which are relevant to new developments, refurbishment schemes and ‘trouble-shooting’ in pubs which have recurring problems of conflict and violence.

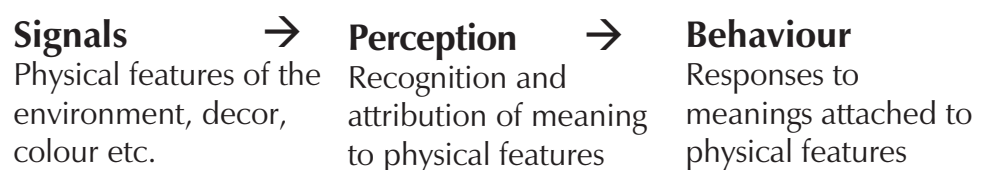
Section 3

Basic concepts For pub design, or any other environmental factor, to have an effect on a person's psychological state or behaviour, it must first be perceived and interpreted. In other words, a particular meaning must be given to the signals which an individual receives from his or her situation. This process of interpretation is largely unconscious, but we are able to act as social persons only by virtue of our ability to render meaningful the contexts in which we find ourselves. Walk into any pub and immediately you sense an 'atmosphere' of the place - the kind of people who use it, the patterns of behaviour and social interaction which you expect to take place inside -even if the pub is empty. Such initial impressions, of course, are not always accurate, but we find it very difficult to be at ease in any environment without at least some basic understanding of where we are and what to expect.

This process of interpreting the surroundings is the only way in which the built environment can have any effect at all. It is even a necessary stage when certain features directly effect our physiological reactions. The colour red, for example, is known to increase levels of arousal in people. As we note in the section *Colour and complexity* in this report, blood pressure rises, respiration rates increase and this, in turn, creates the conditions for changes in psychological states and mood. This increased arousal, however, can have very different effects. In some circumstances it can produce aggressive feelings, while in others it can lead to increased sexual urges (which is why most brothels are decorated in red).

The relationship between the environment and behaviour is summarised, rather crudely, in Figure 1.

Figure 1.



This basic approach warns us against some of the more simplistic assumptions concerning environmental effects. Take, for example, theories which relate to the effects of density and crowding on human behaviour. Some writers suggest that overcrowding leads to increased aggression, hostility, mental disturbance and numerous other negative effects. In some circumstances this, indeed, might be the case. But it depends on how we interpret the overcrowding. If we see it as unavoidable and unwelcome, we will react negatively. In some situations, however, we positively enjoy the sensation of crowding -

such as at a football game or a New Year's Eve celebration. Even on public transport we are prepared to suspend our claims to personal space without any seriously deleterious effects.

Noise levels can similarly be interpreted in different ways. When trying to conduct an intimate conversation, loud music can be intrusive and produce intense irritation. In the context of a disco, however, the same level of sound might be seen as feeble and lacking in excitement.

- Summary 3** Be wary of very simplistic ideas about the links between design features and violent behaviour. The relationship is often indirect. Physical features do not, in themselves, cause aggression - it depends on how people perceive and react to them.
- Some people may get very aggressive in highly stimulating rooms or as a reaction to loud noise levels. Others, however, may feel quite comfortable in such environments. Some people can show aggression if they expect a stimulating environment but find it totally lacking in excitement.
- All design considerations must take into account the intended or projected customer profile and the various expectations which those customers will have.

Section 4

Expectations and discomfort

The significance and meaning attached to any feature in the environment will vary according to the expectations which individuals have about a given situation. For example, consider a particular pub which is known to be very crowded on weekend evenings. Because customers have prior knowledge about the crowding they are more likely to tolerate the lack of space, slow service, smoky atmosphere etc. than if they were in an environment where the problems were not anticipated. Indeed, it is clear that in many city-centre pubs around the country the ‘packed’ effect is what draws other customers in.

Problems arise when customers anticipate one kind of atmosphere in a pub but are confronted by something which is quite different. It is here that certain design features become quite important. The messages of the facade of the building are of particular relevance.

The outside of a pub conveys certain information. By looking at the outside, we create a mental picture and a set of expectations regarding the interior, service standards, range of products, comfort and management style. Where the facade signals are consistent with what customers experience inside, there should be relatively few problems, even if these experiences are not entirely positive. It is when the facade leads us to expect, say, a comfortable lounge with a range of food and ‘up market’ drinks, but the reality is a loud, basic bar with few amenities, the likelihood of frustrated responses is increased. Similarly, customers in working clothes might enter a pub with a relatively scruffy facade and feel uncomfortable when they find plush upholstery and a ‘yuppie’ style of products and management.

Even more serious problems are likely to result when the signals of the facade and the interior have an inherent ambiguity. In these cases there are no clear expectations at all. This can happen when a pub is really neither one thing nor the other. It may have some very smart features, but also some very worn and scruffy ones. From a newly decorated lounge one may visit almost Dickensian lavatories. Antique beams and similar decorative features may be accompanied by loud music systems, video displays and a lack of products most usually associated with ‘olde worlde’ pubs.

The need, then, is for a consistent set of signals within a pub and in terms of the relationship between the exterior and the interior. This, in turn, suggests that piecemeal refurbishment schemes, which upset this consistency, may be significantly counter-productive. Indeed, in some cases, it might be best to do nothing at all rather than give a pub a modest facelift.

This conclusion derives not merely from our research in pubs around the country but also, indirectly, from some basic psychological

research regarding the effects of unanticipated discomfort on human behaviour.

Discomfort can be defined in a variety of ways. Psychologists typically consider factors such as heat and noise, but to these can be added quality and availability of furnishings, cigarette smoke levels - even toilet facilities. The research shows that as discomfort increases, there is a corresponding change of mood in those who experience it. In a number of cases, these mood changes increase the probability of aggressive responses. These responses may arise indirectly as a result of 'stimulus overload', (decline in helpfulness toward others or antipathy to strangers). They can also arise because of triggered frustration (see next section). However they are mediated, the aggressive responses are much more likely to occur if the levels of discomfort are unexpected.

A rather surprising effect occurs, however, when levels of discomfort rise above the moderate level and become more extreme. From Figure 2, which shows the theoretical association between discomfort and aggression, we can see that aggression declines as discomfort rises towards a maximum.

This can be explained in terms of people feeling powerless to change their environment in highly uncomfortable conditions and simply 'giving up' rather than being aggressive. A customer faced with such conditions is more likely to leave than to start a fight. Again, however, it is when the high levels of extreme discomfort are anticipated that this lack of aggression will be manifest. The discomfort, for example, may have built up progressively over the evening and therefore cause little surprise. Alternatively, a pub may already be known to be a highly uncomfortable pub, but attracts customers for other social or personal reasons.

Given that moderately uncomfortable conditions appear to cause more problems of aggression than those which are extremely uncomfortable, we again see implications for refurbishment policies. A pub which is in the 'High' category poses particular problems for the designer and the company who do not wish to invest too heavily in its refurbishment. The temptation is to apply a relatively cheap 'face-lift' involving little more than redecoration and renewal of some furnishings. It is our view, however, that this can often shift a pub from the 'High' discomfort to the 'Moderate' discomfort category, and an increase in aggression is a possible outcome. Avoidance of aggression is likely to be achieved only by refurbishing to a standard which brings a pub into the 'Low' discomfort category.

Summary 4 Discomfort can be defined in terms of inadequate or uncomfortable seating, high noise or heat levels, overcrowding etc.

The relationship between discomfort and aggression, however, is a little unusual and it depends, to a large extent, on the expectations of customers. If they anticipate discomfort, they are less likely to become aggressive than if the discomfort is unexpected.

For this reason it is essential that the outside of the pub gives an accurate picture of what to expect inside. If the facade suggests a comfortable, quiet and up-market setting, but the interior is shabby, noisy and distinctly down-market, customer frustration can be expected.

In addition to these considerations, aggression is likely to be experienced not in the most uncomfortable pubs but those which are in the 'moderately uncomfortable' category. Great care must be taken in refurbishment schemes to prevent pubs which are currently very uncomfortable becoming just moderately uncomfortable by applying a low-cost face-lift. Such schemes are likely to result in increased conflict and violence.

The only safe option in the case of pubs with a very high level of discomfort is to transform them so that they lie at the opposite end of the scale and have very little discomfort. Otherwise it would be best to leave them alone.

Section 5

Frustration A major theoretical perspective in the psychology of aggression and violence concerns the role played by frustration. Frustration, in this context, is defined as interference in goal-directed activity. In other words, frustration occurs when individuals are prevented from achieving what they want, or what they expect, because certain obstacles are placed in their path. The state of frustration does not, in itself, lead to aggressive responses. Rather, it produces a 'readiness for aggression' which, if triggered by some stimulus or event, can result in overtly aggressive behaviour.

The triggers of frustration can be seemingly trivial stimuli which, in the absence of frustration, would arouse little or no hostility.

Numerous experiments have shown that the mere presence of objects associated with violence, such as weapons, can act as effective triggers.

In the context of pub violence and aggression, this approach has considerable relevance. Many sources of frustration can be present in poor service or inappropriate management style. Equally, high levels of frustration can derive from design features and aspects of the pub environment. Lack of seating, jostling caused by poor flow patterns, inappropriate noise and lighting levels, insufficient bar counter space etc. can have cumulative effects on levels of frustration among customers. Potential triggers are equally evident in many pubs.

While abrasive management style may be the most common reason for frustration turning into aggression, hostile stimuli in the pub environment may have a similar effect. Aggressive notices, for example, such as 'Do not ask for credit as a smack in the mouth often offends', may seem trivial and even amusing. To a highly frustrated customer, they can be like a 'red rag' to a bull.

Certain features in the design may also act as 'reminders' of violence. While we do not subscribe to the view, expressed by one psychologist, that pictures of rural hunting scenes will trigger frustration because of their aggressive content, other 'decorative' components might be more influential. The tendency of some publicans to keep cudgels or truncheons on display behind the bar, for example, may be very counter-productive. The use of antique weapons and militaria as decorative features also gives cause for some concern.

Summary 5 Frustration arises when customers are prevented, in one way or another, from achieving what they want or what they expect to obtain. This frustration, if triggered in some way, can, and often does, result in conflict and violence. Up to 45% of aggressive incidents in pubs may be due to frustration.

There are many sources of frustration in pubs which are directly linked to design factors - insufficient bar serving areas, resulting in delays and jostling; poor lay-out, resulting in physical contact between customers; inappropriate heat, sound and light levels; poor quality fittings which are easily damaged, resulting in further damage to customers' clothing, spillage of drinks etc.; fittings in lavatories which are easily vandalised or damaged, resulting in discomfort to customers; inappropriately sited AWP's, cigarette machines, pool tables etc., resulting in irritation to seated customers.

Existing sources of frustration can easily be observed if one spends an evening as a customer in a particular pub. The solutions can often be simple and cost-effective.

Customer frustration is most often triggered by abrasive management styles. Other triggers, however, can be simple reminders of violence which are present in the decor, such as guns, militaria, wooden clubs etc. Such decor items should be removed wherever possible.

Some of the signs and notices which are displayed by licensees can also trigger frustration - especially those which are (jokingly) offensive. All notices in pubs, which convey instructions to customers, should be professionally produced, clear, polite and non-aggressive.

Section 6

Atmosphere The atmosphere of a pub is a very elusive and unquantifiable phenomenon. From personal experience, however, it is clear that we all make assessments of the ‘mood’ or ‘ambience’ of pubs and our attitudes, moods and behaviour within the pub are strongly influenced by such judgements. While it is impossible to design-in a specific atmosphere, it is important to avoid features which might contribute (indirectly) to aggressive moods and behaviour.

We have noted in the previous section how abrasive signs and notices can act as triggers of frustration. They can, of course, also contribute to a more generally aggressive atmosphere – one where belligerent and violent behaviour is not out of place. The presence of other aggressive symbols (pictures, objects on display, content of music and video systems etc.) can also doubly act as triggers and as negative influences on ambience.

This issue is particularly important because of the psychological effects of alcohol consumption. Drinking produces a number of changes, ranging from disinhibition to impaired cognitive functioning. The behavioural effects, however, (ie. what people actually do when they have had a few drinks) are strongly related to situational factors. Among these are signals from the immediate environment which may or may not be conducive to aggressive behaviour. When the atmosphere is such that there are feelings of aggression ‘in the air’, drinking is likely to be associated with fighting. Where such feelings are absent, the effects of alcohol are more likely to lead to increased sociability and positive social behaviour.

Some contributors to the atmosphere are, of course, outside the control of designers. Perhaps the most significant influence comes from the style of management within the pub. Even so, reducing aggressive signals in the design, decor and facilities can have a significant impact on routine patterns of interaction. In addition to ensuring that all signs and notices have a polite, professional quality, there also needs to be a general concern for appropriate lighting, colours, surfaces, and degrees and styles of ornamentation. These are discussed in subsequent sections.

Summary 6 While the ‘atmosphere’ of a pub is often difficult to predict or create through design every attempt should be made to exclude potentially hostile or aggressive elements which might negatively influence the atmosphere.

This is important because the effects of alcohol depend very much on the general ambience in which it is consumed. The content of music and video in a pub, for example, can easily alter the moods of inebriated customers and should, therefore, be carefully selected.

Lighting, colour, reflectivity of surfaces and levels of ornamentation can also contribute directly to overall atmosphere, and hence to the behaviour of customers. These are considered in the following sections.

Section 7

Lighting Levels and colours of artificial lighting within a pub are central to the creation of an appropriate atmosphere. Quite simply, agreeable moods are more likely to be established when people look good. In some pubs the lighting is such that the faces of customers appear almost ghostly because of the colours of shades and even the bulbs themselves. Bright, dazzling lights present in some pubs create irritation while in other houses we have found lighting levels so low that it is almost impossible to monitor and control the behaviour of customers effectively. Strongly tinted lights near the serving areas can make it very difficult to discriminate between, say old-style 5p and £1 coins, providing a basis for arguments and disputes.

To create ‘flattering’ lighting, within the normal range of illumination appropriate to pubs, involves following a simple principle (Kruithof’s) which many designers, unfortunately, seem to ignore. In relatively low levels of illumination, normal skin tones and appearances are created by the addition of light tints ranging from pink to yellow. With higher levels of illumination the same effect is achieved using ‘cooler’ colours such as blue. In all cases, however, the added tints are relatively small and give the effect of ‘normal’ rather than coloured lighting.

This principle, in itself, provides the basis for a ‘friendly’ environment. The mood of the interior can be further enhanced by the addition of directional lighting. This creates a degree of variation between light and shade and is important in defining spatial separation within the pub.

As we note in the section on lay-out, there is a need to break up large, open areas into smaller units which are more conducive to small-group social interaction. Directional lighting, which creates pools of light interspersed with less brightly illuminated areas, can aid this process very significantly by creating psychological divisions between areas and the people within them.

A further important aspect of lighting within a pub is the degree of control which a manager can exercise over it. Effective managers understand the need to ‘wind down’ customers towards the end of evening sessions and to provide clear messages regarding closing time. Manipulation of lighting is often useful in this context. Some managers dim the lights while others increase the brightness. In either case, customers are aware that a change is occurring. In all lighting installations, therefore, it is advisable for sufficient switches and dimmers to be easily available to managers for this purpose.

Summary 7 Lighting in pubs should be designed so that facial colours of customers appear normal and the light generally flatters their appearance. If customers think they look good their mood, and behaviour, should also be good. For this reason strongly tinted lights should be avoided.

Where relatively low levels of lighting are appropriate to the setting, light tints ranging from pink to yellow should be used. In settings with relatively high illumination, slightly cooler, blue tints should be used.

Lighting around the serving areas should be neutral so that colours of products, coins etc can easily be judged.

Extremes of lighting, ranging from dingy to dazzling should be avoided. It is often very useful, however, for a manager to be able to control light levels to cater for varying customers' needs, the time of the evening etc. A bank of dimmers and switches should be provided for this purpose.

Section 8

Colour and complexity

When we refer to colour we usually emphasise its particular hue - ie. the wavelength of light which is reflected from the coloured surface. Colours, however, differ in two further important ways. Firstly, they vary in terms of their intensity or weight. In paints, this is directly related to the amount of pigment which is contained in the clear base. Secondly, colours vary in terms of their greyness. These sources of variation are defined in the British Standards codes which apply to paints and building materials. Two colour patches may contain the same basic pigment, but look completely different because of differences in the amounts of pigment and grey content. The psychological reactions to the patches will also be quite different.

These additional sources of variation in colour lead us to modify our descriptions of them. We speak of 'deep' reds and 'light' greens, or 'dull' browns and 'bright' yellows. Such modifications are important when considering the psychological impact of decorative schemes.

Physiological effects

Many of the psychological effects of colour derive, in part, from the neurophysiological changes which they produce. The central nervous system, which consists of the brain and spinal cord, controls all voluntary human behaviour. This system is kept in a state of varying levels of readiness, or arousal, by a part of the brain known as the ascending reticular activating system, or ARAS. External sources of stimulation give rise to increased activity in the ARAS (phasic arousal), and information coming from visual signals plays a significant role in this context. Repeated phasic arousal produces more gradual changes in the activity of higher brain centres in the cortex - the part of the brain responsible for interpretation of incoming information. This is known as tonic arousal and directly results in changes in emotional state.

Since the 1940s it has been known that different colours produce different levels of both phasic and tonic arousal. Colours with long wave-lengths (red) create higher levels of arousal than those with short wave-lengths (blue / green). Such changes, however, are usually quite temporary. While exposure to red may, initially, lead to higher levels of arousal, as measured in terms of brain activity, heart rate, respiration etc., after prolonged exposure arousal levels may fall to below normal. This is often due to the lack of complexity in single-colour environments.

Visual complexity

It is possible to describe built environments in terms of where they lie along a continuum of unity to complexity. At the unity end, we have settings which lack any variety, and are lacking in stimulation. At the complexity end are settings which are extremely 'busy' and contain many different elements. These tend to produce high levels of stimulation and create a sense of uncomfortable distraction.

In terms of physiological reactions, the contrast between the complexity and unity poles is similar to that between red and blue/green colours. Highly complex environments increase respiration, blood pressure, heart rate and muscle tension. Environments which significantly lack complexity produce low levels of arousal. This under-stimulation, however, can have deleterious effects on mood and behaviour. While highly complex settings are often experienced as stressful and aggravating, the uniform settings can be equally irritating, make concentration difficult and, in some circumstances, can also generate aggressive responses. Bare, white rooms, for example, can be as unsettling as those which contain large amounts of saturated colours and energetic patterns.

Summary 8 Colour can effect behaviour because it produces small changes in the nervous system. Generally, reds lead to increased activity in the nervous system and result in higher heart-rate and faster breathing. Colours at the opposite end of the spectrum, such as green and blue, have the opposite effect.

Generally, green settings are relaxing while those which contain a lot of red are ‘arousing’. In some cases this arousal can lead to aggression. Although we have found higher levels of violence in ‘red’ pubs, the effect is quite small.

In addition to colour in a pub it is also necessary to consider what is known as the ‘complexity’ of the interior. Where there is a lot of pattern and variation the effect on customers can be similar to that produced by red colours. When the interior is simple and contains little in the way of patterned walls or ornamentation, the effect is similar to that produced by greens and blues.

There is a need in any design to achieve a balance between colour and complexity. Refer to the summary at the end of Section 10 for more detailed design implications.

Section 9

Psychological characteristics of colours

The points made above should lead us away from the more simplistic assumptions about the relationships between colour and human behaviour which have recently been proposed. Nevertheless, it is possible to outline the major associations which are normally made with various colours and the differing responses to them which have been identified in psychological research. Where responses or associations vary with the weight or greyness of a particular hue, these are noted. It is important to understand, however, that the findings almost always relate to the effect of isolated colours. Much less is known about the effects of interiors which contain significant amounts of, for example, both red and blue.

Red Standard reds, with fairly high weights and little grey are usually perceived as stimulating. Further increases in weight produce a sense of excitement. Perhaps because of its association with blood, red has also been associated throughout history with medicine and healing. (eg. Red Cross, red flannels in Ireland etc.)

In terms of psychological associations, red has both positive and negative connotations. On the one hand, it is associated with passion, warmth and sexuality. On the other, it conjures up images of aggression, violence and bloody death.

Our research has shown that there is a direct correlation between the dominance of red in pub colour schemes and levels of violence. This is shown in Figure 3. Here we can see that both fights between customers and assaults on managers are higher in pubs with red decor than in those where this colour is largely absent. The interpretation of this relationship, however, is not without problems. The majority of the 'red' houses were those catering for a predominantly young clientele - many of them being 'venue' or 'sports' type units. It is this population of customers who contribute most to problems of violence. It is difficult to tell, therefore, if the presence of red would have a pronounced effect in the absence of that due to customer profile.

Other data suggest that the effect of red is most pronounced in pubs which experience 'medium' levels of conflict and violence. In pubs which have either very low or very high levels of violence, the effect of colour in the decor is totally insignificant. Where the levels of violence, as indicated by the frequency of fights, are in the 'monthly' or 'weekly' categories, the effect is much more marked.

Pink Less saturated forms of red, with low grey content, tend towards pink and evoke very different responses. Here it evokes femininity and fleshiness and is associated with gentle, tender behaviour. Our own research suggests that pink is also seen as a 'clean' colour - even more so than pale blue - which is probably why it is most often used

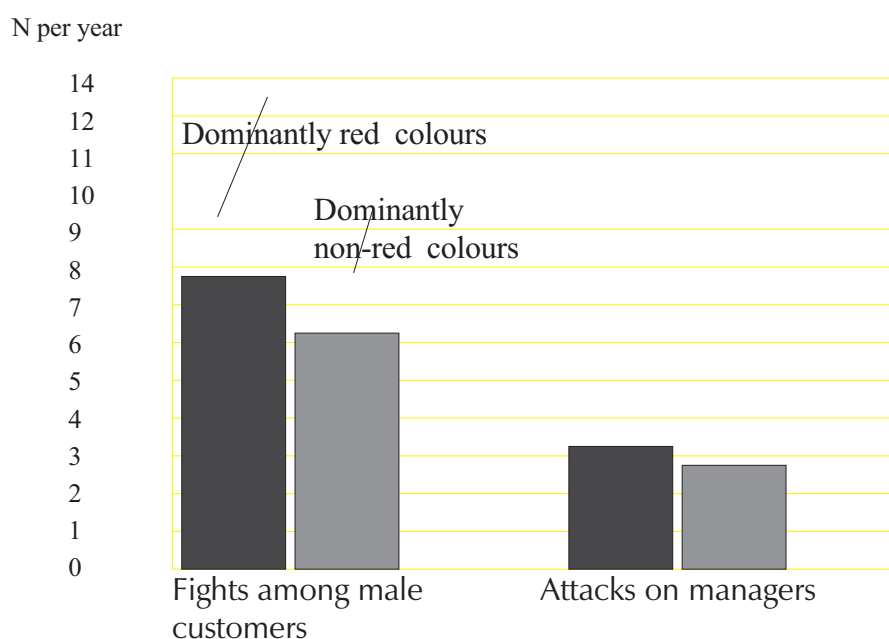
in bathrooms. Some researchers have suggested that pink can have a calming effect, and the reaction of prisoners in pink cells has been claimed to be one of reduced aggression. Such effects, however, may be rather temporary and the colour, on its own, is unlikely to create passivity over sustained periods of time. The use of pink can, however, signal certain expectations of behaviour and, indeed, of expected clientele.

Some of this research is based on the work of Wohlfarth and others, which is often referred to as 'Color-Psychodynamics'. Among their claims is the assertion that a specific type of pink (Baker-Miller pink) can significantly reduce aggressive feelings and behaviour. The research, however, is based almost entirely on small-sample studies in institutions for disturbed or handicapped children in the United States and on research in penal institutions, holding cells, admissions rooms etc. There is, as yet, no evidence that the application of color-psychodynamics to leisure and recreation settings, and to pubs in particular, is at all appropriate. It is also highly probable that the use of the particular shade of pink in question would be deemed questionable on aesthetic grounds. The nearest equivalent colour which is easily available is Dulux 0040-R20B.

Orange The addition of yellow to red produces various shades of orange. Such hues retain the invigorating quality of pure reds but, when less saturated, evoke a sense of cheerfulness. While the hue might often be rejected on aesthetic grounds, its psychological impact is generally more positive than red and has few negative associations.

Figure 3.

Frequency of conflicts in 'red' and 'non-red' pubs.



- Yellow** The general effect of this hue, when in a fairly saturated and pure form, is to produce a cheerful setting. It has been associated with spiritual and religious commitment and communication with others (which is why, presumably, British Telecom have adopted this colour, along with most other communications companies).
- There is, however, a rather negative side to yellow. Some studies have suggested that it can be associated with suicidal tendencies. (We can note, anecdotally, that Van Gogh went through a very yellow period in his art before killing himself.)
- Green** Psychologically, this colour produces low levels of stimulation, leading to peaceful moods. The reason for this is partly to do with the fact that green light focuses exactly on the retina, rather than just in front of it or behind it as with other hues. Many studies have shown that green, even in strongly saturated forms, produces a restful atmosphere. The fact that theatres and TV studios have ‘green rooms’ and surgeons wear green smocks is in keeping with these findings. Because of this, green can be used extensively in pub settings without fear of producing negative effects. However, since green is so restful, and is often used in environments where sustained concentration is required, it may not meet the expectations of customers seeking higher levels of arousal and invigoration.
- One small drawback of green is that if used in any quantity, the reflected light makes skin tones appear rather unattractive.
- Blue** Blue shares some of the psychological qualities of green and, in light forms, produces relaxing settings. In dark shades, however, the effect can be rather intimidating and oppressive. For this reason such colours might be avoided in order to create a ‘lighter’ mood in a pub.
- Purple** This is a very seldom used colour in domestic environments, except in intimate areas, and is equally rare in public and leisure settings. In large quantities it can disturb one’s ability to focus and may well contribute to feelings of frustration.
- Grey** Recent fashion trends have coupled grey with pink to produce a ‘designer’ feel to the decor. While this might influence customer profile, grey has little to commend it in terms of psychological reactions. The general effect of the colour is one of boring neutrality and innervation.
- Black** This produces a very odd effect in most environments. It is difficult to perceive the true physical boundaries of rooms which contain a lot of black. In general, the colour evokes a sense of dangerous insecurity and is quite unsuitable for use in pubs.

Summary 9 The psychological characteristics of various colours have been outlined in this section. Even though colours never act in isolation from other design features, these may be useful when evaluating existing colour schemes or when designing new ones.

The section on ‘pink’ also deals with the claims of the so-called Color-Psychodynamic school. Our view is that the effects claimed for a particular shade of pink have been exaggerated and that the background research has been in settings too remote from that of the pub to have direct implications for pub design.

Because this entire section has been presented in summary form no further summary is given here.

Section 10

Interactions From the previous sections it is clear that both colour and visual complexity are instrumental in increasing or decreasing levels of arousal and that levels of arousal are related (at least indirectly) to the probability of aggression. If we now consider the interaction of these two factors we can derive a simple theoretical model which has direct implications for pub design.

Figure 5. shows visual complexity on the horizontal axis and colour wavelength on the vertical. Overlaid on these axes are two vectors which indicate predicted low and high levels of aggression. If we consider the 'High aggression' vector, this includes designs in the top right quadrant where both high levels of complexity and long wavelength colours (red) are present. It also includes designs in the bottom left quadrant where a lack of complexity is coupled with short wavelength colours (blue, green etc.). In these cases the low levels of stimulation, as noted before, can have an innervating effect which can produce irritated and aggressive responses.

The 'Low aggression' vector cuts through the two vectors diametrically opposed to those of the 'High aggression' vector. In the top left quadrant we find designs where the arousing effect of red is offset by low complexity. Similarly, in the bottom right quadrant the energising effect of high complexity is tempered by shorter wavelength colours.

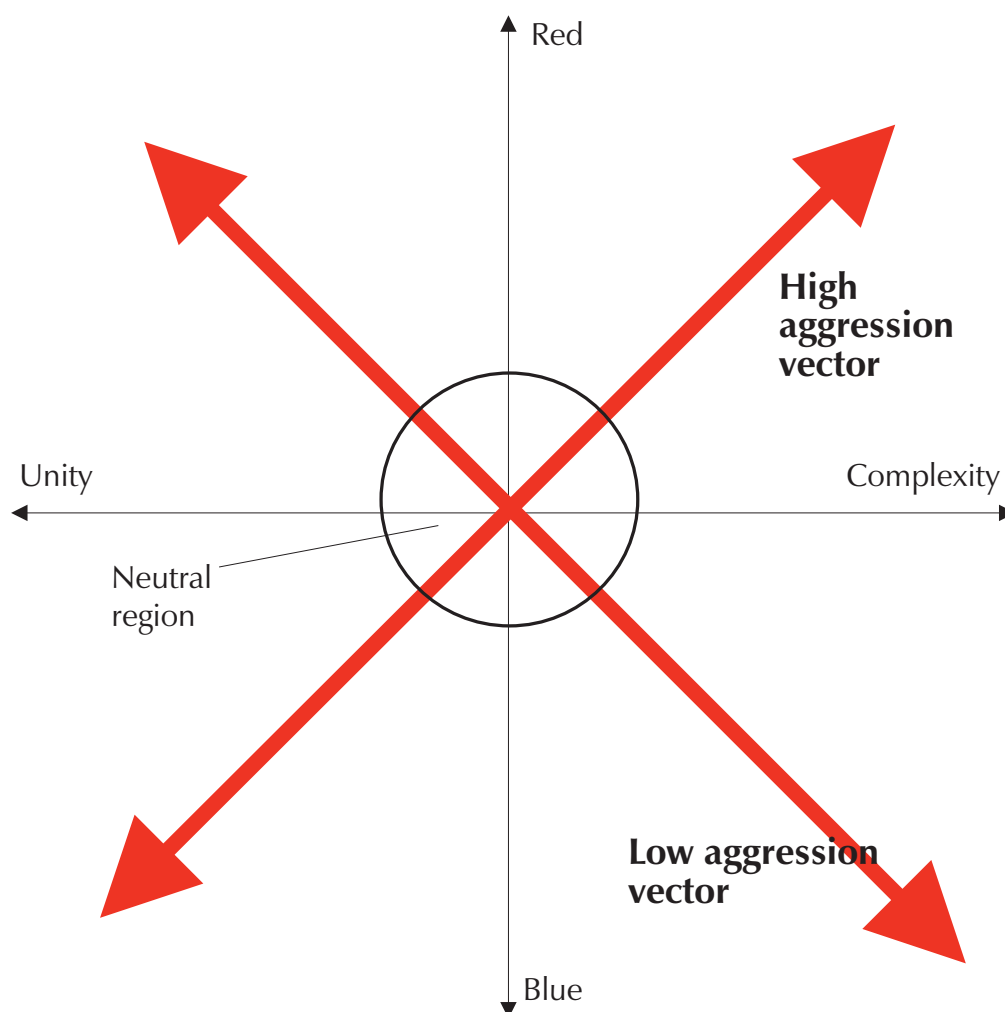
The circle around the origin of the two axes represents a theoretically neutral region where the effects of colour (mainly browns of various levels of grey and intensity) and visual complexity will be insignificant.

This model translates very easily into practical design considerations. There is, however, a further complication. This is to do with the surfaces to which colour is applied and the surfaces from which it is reflected. Designs which include hard finishes such as gloss paints, metallic and glass surfaces etc. will amplify the arousing nature of reds and add to visual complexity through reflections. The effects of complex, red environments, for example, can be mitigated by soft surfaces and a lack of reflection. Simple, blue interiors, in contrast, may be made more stimulating by the presence of hard and reflective surfaces.

Summary 10 As noted in Section 8, it is necessary to consider the issue of colour along with other factors which may increase or decrease levels of arousal among customers. Very high levels of arousal may lead to conflicts and aggression. Very low levels of arousal, however, can lead to a sense of irritation and lack of excitement among customers which may also contribute to aggression.

To minimise the potential for violence it is necessary to achieve a balance between three factors: colour, complexity of the decor and

Figure 5.



the reflectivity of the surfaces within the pub.

Red colours in conjunction with high levels of pattern and a predominance of shiny surfaces will generate the highest levels of stimulation. A lack of strong colour accompanied by simple decor and non-reflective surfaces will generate the lowest levels of stimulation.

Where the overall scheme lacks much pattern, or complexity, and where soft, non-reflective surfaces dominate, red may be used quite safely. However, where the decor is more complex, or where there are a number of reflective surfaces, red should be used with caution.

In such cases it is generally better to opt for colours such as green or blue, which can safely be used in fairly saturated forms, or for more muted shades and colours such as beige.

Section 11

Lay-out Attention to pub lay-out is critical if conflict and aggression are to be minimised. Of major concern here is the ability of a manager to supervise all activity in his pub from one, or a limited number, of positions. This, in turn, allows him to employ early-intervention strategies to calm or defuse potentially difficult situations.

Monitoring and open-plan designs The traditional two- or three-bar designs of English pubs make such surveillance difficult. In order to remedy this problem and, perhaps more directly, to increase trading area, many pubs have been rebuilt in an open-plan design. Most of these have the bar serving area at one end or along one wall, but others feature island serving areas. In many cases, while the problems of surveillance may be at least partly resolved, other negative consequences are evident. These derive principally from the lack of separation between groups of customers.

Failure to provide adequate separation within the pub can easily result in behavioural contagion. A small incident or heated argument in one part of the pub can easily be witnessed by those in other areas. In this way both the mood and the behaviours present in the incident can spread to other customers who are not directly involved.

The aim, therefore, should be to subdivide the open-plan design in such a way as to achieve *psychological* separation, even if there is only token physical division.

One very effective way of doing this is to divide small groups of tables and/or fixed seating using mesh screens. A typical example would be a wooden diamond lattice with, say, a 2" mesh or slightly smaller and up to 7' in height. These screens provide customers with a feeling of enclosure. Although it is clearly possible to see through them, they act as psychological barriers and function as if they were opaque. The manager can still monitor behaviour through them but risks of contagion are reduced. More solid partitions may be erected where the manager is able to see directly into the enclosures from behind the bar or from his usual position.

Open space can also be psychologically divided using changes of decor, lighting etc. which communicate different expectations regarding the use of such space. One part of the pub, for example, might have brighter colours and lighting, sound system loudspeakers, AWP's etc., indicating its use for younger customers. Another part of the same space might have more subdued colours, lower lighting levels, a lack of loudspeakers and a different style of tables which indicate its use for quieter social interaction and conversation. In this way there is likely to be less friction due to the competing interests of groups and individuals within the pub.

Where subdivision of the open space results in 'blind' areas, certain remedial steps are possible. Decorative mirrors, as opposed to security devices, are favoured by many managers who learn to make

use of them very effectively. When built into coherent schemes, these mirrors do not stand out and are generally ignored by customers.

Flow patterns It goes without saying that efforts should be made to minimise jostling and physical contact between customers in the pub. In many popular pubs, however, this is unavoidable. Appropriate siting of toilets, cigarette machines and other amenities can reduce this to a minimum, but there will always be a crush on Friday and Saturday evenings if trading is high. Effective managers compensate for this by removing stools from the bar counter, keeping chairs out of flow areas and generally being alert to potential problems.

From a design point of view, separation of the open space can also, again, help to reduce conflict by limiting areas in which jostling can occur. The partitions help to define, for example, the seating areas and deter passage through them. In this way, groups of customers can be isolated from movement in the rest of the pub.

Pool tables An area which requires special attention in this context is that containing the pool table. In poor designs the table is situated so that players are regularly interrupted by customers passing by. Since 20% of all pub violence arises from pool playing, this is clearly highly undesirable. In the best designs the table is positioned in such a way that there is no need for customers to pass near the table unless they are actually playing. Simply re-siting a cigarette machine can improve matters greatly. When refurbishing and remodelling there is greater scope to establish an area which is easily supervised and which has no flow route passing through it. The area can be further defined using a change in flooring surface, decor and lighting to reinforce its isolation from the rest of activity in the pub.

Provision should also be made in the design for the fixing of a chalk board and a notice board. The former can be used to ensure orderly turn-taking on the table, thus preventing one source of disputes. The latter should be used to display the rules of the game - an equally frequent source of arguments.

Relative heights Many modern designs in pubs feature raised or lowered areas which, in turn, separate and identify the function of the various spaces. While this might have a number of beneficial consequences, there are also some potential drawbacks which should be considered. We have to remember that the majority of pub violence occurs when the offender has an audience. In many cases, a fight will occur because one individual wishes to announce to his peers that he is a 'tough, macho male' and can 'stand up for himself'. Effective managers understand this and try to reduce the 'audience effect' when dealing with offenders. Raised platforms, however, can sometimes provide a very useful 'stage' for this kind of aggression.

One way of avoiding this is to define the raised spaces as being for that section of the clientele which is least likely to cause problems.

This, in turn, means deterring young males aged 18-25 from using them. One might place ‘attractive’ features such as sound systems, videos, AWP’s etc in the lower areas, accompanied by a more energetic decor. Upper areas might be more softly furnished, admit only small groups due to fixed seating and table size and have a more ‘restful’ tone. Whatever solutions are attempted it is imperative that pool tables are not positioned in these raised areas.

Other manipulations of relative heights within the pub can involve raising the floor behind the bar counter. We have noted recommendations from elsewhere that the floor should be raised by four inches in order to facilitate supervision. It is claimed that bar staff are more able to see waiting customers and deal with them in their proper turn. While these may be real advantages in some pubs, there are also some serious drawbacks to such designs. Principally, the effect can be to make staff look more intimidating and (metaphorically as well as literally) aloof. This, in turn, is likely to increase the amount of conflict and negative perceptions on the part of customers.

Our opinion is that raised floors behind bar counters are rarely advisable except in certain types of wine bar schemes where the ‘staff on a pedestal’ feature is part of the whole ‘up-market’ image of the establishment. The small benefits of raised floors in ‘normal’ pubs, such as raising the visibility of products on in the rear fittings, are easily outweighed by the negative impact on staff-customer interactions.

Summary 11 There is an essential conflict in many pub designs between the need of the manager to be able to monitor the behaviour of customers on the one hand and on the other hand the tendency of customers to prefer a sense of isolation from others in the pub and enclosure of their social group.

Open-plan designs often meet the needs of the manager in this context but fail to satisfy customers. Such designs also permit the ‘contagion’ of aggressive behaviour. A small incident becomes highly visible in these settings and can significantly influence the mood and subsequent behaviour of other customers elsewhere in the pub.

Traditional two- or three-bar designs often meet customers wishes more adequately and also limit the contagion of aggression. They present, however, problems for the manager who is less able to detect aggression developing and, therefore, to take early, preventative action.

Optimal designs include the best features of both the traditional designs and open-plan arrangements but minimise the potential drawbacks. Such designs include an open-plan space which is divided in such a way that groups of customers are visually, or psychologically, separated but the manager and staff can monitor the activities of everyone in the pub. The devices used to achieve such separation can include solid partitions where they do not obstruct the manager’s view, or trellis or mesh partitions where ‘blind spots’ would otherwise be created. Changes in levels of illumination or pools of light can also provide illusions of separation and enclosure.

The flow of customers within the pub must be anticipated at the design stage. Customers must be able to approach the bar and return to their seats with the minimum physical contact with others, especially those who are seated. Flows to and from lavatories, vending and amusement machines should similarly be unobstructed. By reducing the potential for jostling, spillage of drinks etc. many sources of conflict can be avoided from the outset.

Pool tables, if their inclusion in scheme is thought desirable, should be situated in a position away from customer flows. One fifth of all pub violence arises from the use of pool tables and extreme care must be taken to ensure that the manager is able to monitor the behaviour of players effectively. A chalk board, for orderly turn-taking, and a notice board to display the rules of the game should be provided. Strong red colours, striking patterns and hard reflective surfaces should be avoided in the pool area. The game is stimulating enough in itself!

Raised areas or platforms in pubs should be designed very carefully because they can provide ‘stages’ for macho behaviour. Pool tables should never be placed on raised areas for this reason. Other features

which might attract young males, such as AWP's etc, should similarly not be placed in such areas.

Raising the level of the floor behind the bar counter, which is often seen as desirable because it increases the ability of staff to see customers who are waiting to be served, may have some drawbacks. The raised height of staff can make them seem more dominating and potentially hostile. We believe that the benefits of raised floors are usually outweighed by the increased potential for staff/customer conflict and recommend that they should not be used except in specialised designs such as wine bars.

Section 12

Concluding summary

It is difficult to translate all the points made regarding the impact of design features on levels of conflict and violence into simple formulae which apply in all cases. The summaries given at the end of the previous sections should be given careful attention. Below, however, we provide an overall summary of the main areas for consideration in the light of customer profile, trading styles, location and physical limitations of pubs.

Monitoring and surveillance – Aim to provide unobstructed views of all areas of the pub while retaining visual separation between groups of customers.

Frustration – Consider all potential sources of customer frustration which might arise from design changes or refurbishment. Avoid elements which may act as triggers of frustration or adversely affect the atmosphere of the pub.

Discomfort – Avoid designs which are in the moderately uncomfortable category. Where a pub has a high degree of discomfort, modest face-lifts are likely to increase problems of aggression and violence.

Consistency – Ensure that the exterior and interior of the pub communicate consistent messages to customers. Inconsistencies between exterior and interior, and within the interior itself, can result there being no clear rules regarding acceptable behaviour.

Colour – use colours in the interior to create a balance between over-stimulation and soporific blandness, bearing in mind customer profile. Potential dangers associated with the use of red can be reduced by appropriate attention to surface textures and levels of visual complexity.

Lighting – Ensure that lighting provides a normal or flattering effect on human appearance. Provide flexible control over lighting levels. Use lighting to create psychological separation in open-plan pubs.

Lay-out – Minimise the potential for jostling, and subsequent aggression, by paying attention to projected flow patterns, obstacles and bottle-necks within the pub.

Pool tables – Ensure that self-contained but easily supervised areas are provided for these. Keep away from customer flow routes.

Relative heights – Be wary of increasing the floor height behind the bar counter. Ensure that raised seating areas are not likely to become ‘stages’ for aggressive behaviour.