

The diner, McDonald's and petrol station provide evidence of a new 'vernacular'. *Tours de force* of prefabrication and standardization, these reviled forms of building deserve consideration.

Lessons at the roadside

Colin Davies

Architects should learn to communicate more through their architecture. The commercial vernacular architecture of the American 'strip' – motels, gas stations, fast food outlets – communicates loud and clear. In comparison, high architecture, particularly the high architecture of Modernism, is sullen and silent. This, roughly, is the thesis of *Learning from Las Vegas* by Robert Venturi, Denise Scott Brown and Stephen Izenour (1972 and 1977), one of the key texts of the Post-Modernist movement in architectural theory of the early 1970s. Venturi *et al* thought architects could learn a lot about symbolism and communication from the sort of non-judgmental study of roadside architecture that their students had undertaken at Yale. In the second half of the book the idea was developed into a theory and encapsulated into a universal building concept, 'the decorated shed', which has since become a cliché of architectural criticism. The

decorated shed was designed to overthrow the most cherished beliefs and rituals of Modernism. Expression through form was to be replaced by the 'persuasive heraldry' of the totem and the billboard; articulation of detail was to be replaced by old-fashioned applied ornament; and the 'heroic and original' was to be replaced by the 'ugly and ordinary'. But the emphasis was on the decoration rather than the shed. *Learning from Las Vegas* did not have much to say about the way that the sheds of the commercial strip were constructed, other than describing them vaguely as 'system built', or about the implications that the technology of their construction might have for architectural practice.

Roadside architecture can teach architects more than just how to communicate. It can teach them about repetition and reliability, about the appeal of the temporary and the provisional, and about the benefits of a loose relationship between a building



1 A 1907 lunch-wagon, half gypsy caravan and half railway carriage



2



3

and its physical setting. Most obviously, it can teach them how to make prefabricated buildings that are really, not just theoretically, cheaper. The obvious example to take is the drive-in or 'drive-thru' fast-food restaurant that, from the point of view of prefabrication, has an interesting precursor in the American diner. The history of the diner is like a differently coloured version of the history of the mobile home.

Origins of the diner

According to diner-chronicler J. S. Gutman (2000), the very first diner was a small, horse-drawn 'lunch wagon' owned by one Walter Scott who lived in Providence, Rhode Island in the early 1870s. Scott saw a business opportunity in the provision of 'night lunches' to workers, drinkers and other urban night owls. Instead of opening a late-night restaurant in a permanent building, he cut overheads and avoided taxes by wheeling his kitchen around town and serving customers on the pavement. The business succeeded and soon there were many imitators. So the first lunch wagon/diners, like the first mobile homes, were definitely vehicles. Although in subsequent decades they were to grow bigger than any road could accommodate and take root on permanent sites, to this day they remain in the public mind a species of vehicle. Your local diner may have occupied its street corner for decades, but one fine lunchtime you just might find that it has moved on. Theoretical mobility is somehow essential to the concept of the diner.

Between 1880 and 1920, the lunch wagon evolved step by step into the diner. First it was made a little larger so that customers could come in out of the rain. Then certain entrepreneurs, like T. H. Buckley of Worcester, Massachusetts, began manufacturing standardized (though not mass-produced) lunch wagons in factories, selling them to enterprising individuals and chain operators in towns and cities across the north-eastern states (Gutman, 2000). The typical lunch wagon of the early 1900s looked like a cross between a gypsy caravan and a railway carriage, long and narrow but with only four small wheels [1]. It was a handsome, hand-crafted object, painted in gaudy fairground fashion with stained or etched glass in its windows and a marble-countered and ceramic-tiled interior. Very soon lunch wagons

2 Classic American diner on a London Docklands site

3 Starvin Marvin's in west London (England), a 1950s-style diner

4 S-Bahn railway carriage as diner, Schönefeld Airport, Berlin

became too big to trundle through the streets on a regular basis and began to occupy left-over urban sites more or less permanently.

It was probably the lunch wagon's growing resemblance to a railway dining car that suggested the change of name to 'diner' around 1924. Diners were often moved from factory to customer by rail, but they were always, in theory at least, road vehicles. It was at this time that they began to appear on roadside sites outside city limits, serving the motorist rather than the pedestrian. In the 1930s, steel took over from hardwood for the structural frame of the diner and shiny metal streamlining came into fashion, just as it did for domestic trailers. In 1941, thirty years before the development of the 'double-wide' mobile home, Paramount Diners patented a sectional diner, breaking through the width barrier imposed by road and rail travel by making the diner in two longitudinal halves and zipping them together on site (Witzel, 1998). The new 16 foot standard width allowed ample room for what is now considered to be the classic diner plan: a long bar counter down the middle of the space with an open, linear kitchen on one side and stools for customers on the other, plus a row of four-person booths.

The '40s and early '50s were the golden age of the roadside diner. The stainless-steel, Art Deco look stayed on longer than it had any right to, entering a baroque phase of fluted sunbursts, rounded corners and towering jukebox vestibules striped with neon and emblazoned with sky signs [2, 3]. The style became part of the very definition of a diner, a piece



4

of joyous, uninhibited folk art, doomed eventually to end up in a museum. Multi-section diners grew into fully-fledged family restaurants. When, in the 1960s, certain manufacturers began to make 'colonial diners' with brick walls and columned porches, it was obvious that the end had come for the archetypal diner. There was a revival of interest in the 1990s, when long established manufacturers like Kullman and Valiant re-issued a few classic models, but by now 'Diner' had become merely one of a number of possible themes in restaurant design.

Fast restaurants for fast food

Looked at coldly, the diner is a very curious building type [4]. For one thing, there is the confusion about wheels. Does a prefabricated restaurant have to have wheels to qualify as a diner? And what are the wheels for exactly? The wheels of a mobile home may only touch a road on the day of its journey from factory to site, but they do at least have that real function. But diners, in the latter phase of their development, were rarely towed along on their own wheels. A fully equipped and fitted out diner was much heavier than a mobile home, and when it was towed on its own wheels it moved at a crawling pace. Long interstate journeys were out of the question. Mobile home factories were numerous and widely distributed, serving areas limited by the distance that a home could be towed in one day, but the handful of specialist diner manufacturers were concentrated in north-eastern cities. Some long journeys were inevitable. In practice, therefore,

diners were moved by rail, by barge and by road on flat bed trucks. As early as the mid 1920s, the Tierney brothers' diner factory on Long Island Sound was sending diners to Florida four at a time by boat (Gutman, 2000). At some point in the 1950s, most manufacturers quietly omitted the wheels. For a while therefore, the diner was a semi-standardized, modular, prefabricated building, vaguely reminiscent of some kind of road or rail vehicle. It was dedicated to only one function – that of a restaurant, and a particular kind of restaurant at that (in nostalgic coffee-table books about diners, the menus get almost as much attention as the architecture). It was a weird conjunction of technology, image and function. No one seems ever to have thought of using a diner for any other purpose – as a shop say, or a bank or a doctor's surgery. Or a house. The classic diner look – stainless-steel streamlined – was at odds with its actual status as a building placed permanently on a site. It was not really a vehicle, but it continued to pretend to be one and thereby escaped any duty to respond architecturally to its context. When the phoney contextualism of the colonial style came along the spell was broken and the diner manufacturers woke up to the real nature of their product. Kullman Industries Inc was founded in Newark, New Jersey in 1927 and became one of the biggest diner manufacturers. The company still exists and still makes diners, but only as a sideline for the nostalgia market. It now mainly manufactures prefabricated building modules for schools, hospitals and prisons.

While there had always been a few diner chains, most were thought of as an individual enterprise serving local food, with individual menus. So, when the diner took its place in the roadside strip where it might have to cater for motorists from miles away with different tastes, there was an awkward contradiction, one that was to be exploited mercilessly by the emerging fast-food chains. The brothers Richard ('Mac') and Maurice McDonald opened their first restaurant on Route 66 in Arcadia, California in 1937 (Witzel, 1994). It was a drive-in, a format that had originated in Texas, where it was called a 'pig stand'. At that time, the drive-in became the diner's fiercest competitor. Customers pulled off the highway, parked in the parking lot, sounded their horns and waited for a 'car hop' (often a girl dressed up like a cheerleader) to come and take their order [5]. It suited lazy motorists and profit-margin-conscious restaurateurs alike. Overheads were minimal and, since it only housed the kitchen, the building was small and cheap. But the decisive innovation came after the Second World War when the McDonald brothers, noticing the increasing impatience of their customers, decided to speed up service by drastically rationalizing their menu.

Customers could choose from only nine standard food items, mainly hamburgers, but the food would be served immediately, through a window in the building, in disposable paper and plastic packaging, and it would be paid for on the spot. One transaction, no waiting. It was called the 'Speedy Service System' – not drive-in, but walk-up.

In 1952, the McDonald brothers decided to franchise their system and by 1959, with the help of an ex-kitchen equipment salesman, Ray A. Kroc, new restaurants were opening at the rate of 100 a year (see Langdon, 1986). The final element of the winning formula was now in place. The menu was identical in every restaurant, so all McDonald's had to do was devise a standard hamburger that everybody liked and a standard sign that everybody recognized. Repetition and reliability would guarantee success.

The golden arches: identity and market domination

The sign was crucial, and the building was part of the sign. The first standard roadside McDonald's was built in 1953 in Phoenix, Arizona. It was candy striped in red and white with a big, wrap-around window sloping outwards in the manner of an airport control tower. The monopitch roof had a



generous overhang, flared up at the front, and notionally supported by, or possibly suspended from, two separate parabolic arches [6]. Mac McDonald is said to have designed the building himself, showing his crude sketches to several architects before finding one – Stanley C. Meston – who was prepared to take it seriously and have it drawn up by one of his assistants. It was this assistant who made the rounded arches of Mac's sketch into parabolic arches, possibly influenced by Eero Saarinen's famous St Louis Arch, drawings of which had been widely published though it had not yet been built. The assistant did a good job. The parabolic arch struck just the right optimistic note and the style of the whole building was fresher and lighter than the tired Art Deco of the typical diner. The building itself was a sign, but there was also a separate sign, a 'totem', then as now the essential companion of any commercial roadside building. It consisted of a third parabolic arch, supporting a large rectangular lettering board on which danced a little hamburger-headed cartoon character called 'Speedee'. Eventually, as everyone in the world knows, two of the three parabolic arches were to join together and become a logo. In an early version, the

arches overlapped and were cut by a diagonal line to represent the monopitch roof, as if the logo were a simplified picture of the building. It was not until 1969 that the arches finally cohered into the well-known yellow M for McDonald's (Langdon, 1986).

By the late 1960s, the fast-food system had trounced the diner and drive-in competition. The combination of uniform price, product and image with expensive national advertising campaigns was unbeatable. McDonald's little double-arched buildings had multiplied and covered the country, and there were many imitators: Hardee's, Carrols, Sandy's, Burger King and a dozen more. But the architectural climate was changing, becoming less hospitable to the colourful, throwaway image. In 1964 Peter Blake (1979) had written an influential book called *God's Own Junkyard* (to which *Learning from Las Vegas* is partially a riposte) and the great and the good, led by Ladybird Johnson, were calling for the nation's roadsides to be tidied up. And there were other architectural pressures on the architecture of the fast-food outlet. Roads were getting bigger, traffic was increasing and customers began to crave refuge and shelter, a walk-in rather than a walk-up, and possibly even a sit down.



6

5 Britain's first drive-in restaurant, The Ox in Flames

6 The original candy-striped McDonald's restaurant, the arches possibly inspired by Eero Saarinen's St Louis monument

McDonald's responded to these pressures with a new standard building designed by Donald E. Miller in 1968 (Langdon, 1986). The serving counter was brought inside and there were tables to seat sixty. Customers were not encouraged to linger – there were no jukeboxes or pinball machines – but there were just enough facilities for this to count as a proper restaurant. However the most interesting change was in the building's external appearance. The arches were scrapped, or rather banished to the totem as a mere graphic device. The candy stripes gave way to brown brickwork and the assertive wing-like roof became an excessively modest double mansard with curious illuminated metal ribs attached. Venturi *et al* make no mention of this strange transformation, but surely they would not have approved. This is the architecture of non-communication, the architecture of quiet conformity. But the appearance of the building was less important to McDonald's than it had been. If the taste police wanted a more 'contextual' look, they could have it. Provided the instantly recognizable totem was visible well in advance from the road, the building had no need to advertise itself. The important advertising now took place not on the roadside, but over the airwaves. And yet, despite its ordinariness, McDonald's were concerned enough about the exclusiveness of their new design to patent its absurd double mansard roof. And perhaps they were right, for there were many imitators. Pizza Hut, for example (a brand named after a building), not only used the double mansard on their buildings, but also made it into their logo – a good example of architecture as marketing.

Of course the idea that the basic roadside McDonald's is a 'contextual' design is laughable. The roadside strip is not a 'context' in the usual sense of the term. It lacks any consistency of form, colour or texture to which a new building might be required to conform. The way to be contextual on the strip is to stand out and be different. It is not surprising then, that when the standard roadside McDonald's crossed the Atlantic in the 1980s and took its place in the tamer, tidier roadside environment of Britain, it stayed more or less the same [7]. Brits have got used to it, but it still doesn't look quite right. The imitation-tile-clad double mansard with its inexplicable metal attachments could not have been designed by any indigenous architect. To see the British equivalent

you only have to look at the Little Chef that you're sure to find a little further down the road. The typical Little Chef has real brick walls, red-painted window frames and a steeply pitched roof with white weatherboarded gables – an uneasy mixture of contextual neo-vernacular and roadside flashiness. In catering terms it is a hybrid of American forms, something between a diner and a fast food outlet, with an extensive but standardized menu. The Little Chef was the name of a standard 10-stool, steel-framed 'dinette' made by Valentine Diners of Wichita, Kansas and popular in the 1940s. However if the British Little Chef borrowed the name, it certainly didn't borrow the prefabricated building technology (Witzel, 1998). It was the Little Chef chain, then owned by Forte, that built the first modular budget hotels in the 1980s when American-style roadside catering first began to take hold of the British market.

Pioneering prefabricators

Soon afterwards McDonald's arrived and began to demonstrate how a management ethos developed for the production of hamburgers could be applied to the production of small buildings. Most British roadside McDonald's are called 'drive-thru' restaurants (order from your car at one window, drive round to the other side of the building and pick up your hamburger at another), but casual observation seems to indicate that most British people prefer to park, stretch their legs, and take their place in a queue of people rather than a queue of cars. The drive-thru capability is an added feature rather than an essential determinant of the plan, which is usually a plain rectangle, kitchens in one half and customers in the other, with seating for about 50. The first drive-thrus were conventionally site-built, but McDonald's were dissatisfied with the 12- to 16-week construction time (fast by British standards) and decided to experiment with prefabrication. Light steel modular designs were developed with manufacturers such as Yorkon and Britspace. A standard restaurant consisted of six 18m by 3m modules fitted out in the factory with wiring, plumbing, kitchen equipment, chairs, tables, notice boards, plant pots and so on. Walls were of imitation brick – thin slips glued on in the factory – and the mysteriously long-lived double mansard roof-edge was also factory-tiled on a steel frame. On some sites even the foundations were prefabricated.



7 A typical British McDonald's drive-thru, built on site in eight days or less

8 A 1960s architect-designed garage, before oil company branding took over

9 Branded service station, before self-service and therefore without canopy

7

Prefabrication reduced the total build time to four weeks, and site operations, from delivery of modules to first hamburger sale, came down to eight days or even less. It was more expensive than conventional site-build, but it became cheaper when the profit from the extra hamburgers sold was factored in.

Such speed and efficiency was rare in the British construction industry. The McDonald's drive-thru became the subject of technical case studies published by interested parties like the Steel Construction Institute and the Movement for Innovation (2001), an arm of a government initiative called *Rethinking Construction*.¹ These publications were of limited appeal to the upper echelons of the architectural profession for whom the little American building was as contemptible as the product it sold. Nevertheless, word did get around and a few influential friends of architecture like Dickon Robinson, director of The Peabody Trust, a major social housing provider, began to ask why similar prefabrication techniques should not be applied to other building types such as housing. Under pressure from the government and progressive clients, architects were at last taking notice of a technology they had hitherto chosen to ignore. Companies like Yorkon, Terrapin and Britspace had been making modular buildings for decades, but architects had always looked upon them as temporary buildings. A McDonald's drive-thru was no monument, but neither was it a temporary building. And the very fact that one of the world's biggest (and most notorious) multi-national companies was buying familiar British branded buildings made at least a few architects stop and think.

Petrol stations and the International Style

In America roadside restaurants, like suburban house-owners, demand their own patch of land, their own parking lot, their own turn-in and their own

totem. In contrast with this co-operation is the norm on British motorways. The typical motorway services building is managed by one company, but usually includes a variety of franchises all sharing a same food court and lavatories. Similarly, the main building shares the same turn-in and often the same car park with the other buildings on the site – perhaps a Travelodge and a Little Chef, or a Days Inn and a McDonald's. In Britain, roadside buildings come in clusters, not strips. At the heart of the cluster, like a parish church in a country village, stands the petrol station. Martin Pawley (1993) has called the petrol station, or one aspect of it, 'the last truly Modern design project of the Modern age'. He was talking about Shell's Retail Visual Identity Programme, launched in 1990, its aim to redesign the appearance of no fewer than 40,000 filling stations all over the world. Pawley's point was that while other multi-national companies, including McDonald's, were willing to compromise architecturally with conservative forces, toning down their fascias in historic cities and putting meaningless mansards on their drive-thrus, Shell still believed in 'Modernism and the international way'.

The petrol station is the branded building *par excellence*, though it is hard to see quite why. Petrol is what marketing people call a 'distress purchase'. You stop and fill up because you are afraid of running out and being left stranded. The petrol station that gets your custom is the next one after the needle touches empty, no matter which company owns it or supplies it with petrol. Or perhaps you plan ahead and always buy the cheapest, in which case you are looking for the price panel not the company logo. No one believes that one company's petrol is actually better than any other's, so why is every petrol station forced to wear a uniform? It is one of the mysteries of marketing lore. Nevertheless, oil companies spend millions of pounds branding and re-branding their



8



9



10

chains, and design companies (not architects) thrive on the business.

From an architectural point of view, it isn't the branding itself that makes the petrol station interesting, but the standardization of form and building technology that branding encourages. The petrol station has become a settled vernacular building type and it has achieved this not through invention or original design but through a gradual process of evolution. In Britain the process began in the 1930s, when Shell Mex and BP operated a joint marketing policy. Much to the annoyance of conservationist organizations like the Council for the Protection of Rural England, they began imposing their livery, mostly in the form of illuminated pumps and two-dimensional signs, on a heterogeneous collection of privately owned garages and forecourts [8]. In the late 1950s, the first single-brand, or 'solus', service stations appeared and the gradual corporate take-over of the roadside environment was under way [9]. But the most important mutation occurred in the 1960s, when standardized forecourt canopies first appeared. Covered forecourts were not new. American gas stations of the 1930s often sported porch-like extensions to shops or kiosks, adorned with Classical pediments or Art Deco fascias (see Witzel, 1992, for examples). But the canopy first appeared in something like its modern form in 1964, when the architect and industrial designer Eliot Noyes designed the standard 'Pegasus' gas station for Mobil, regarded in the industry as a milestone in petrol marketing (Jones, 1998). It was uncompromisingly

Modernist, with a little box-like but elegant shop, cylindrical pump housings, a modest sign on a stick, and a small circular canopy cantilevered from a single column like an umbrella. If anyone should be credited with the invention of the modern petrol station it is Noyes [10]. However, it took time for the canopy idea to catch on in Britain. Petrol pump attendants continued to get wet while their customers sat tight in their cars. It was self-service that triggered the change.

The self-service petrol station was introduced to Britain in 1966, when property developer Gerald Ronson began developing a chain of petrol stations and motor dealerships under the Heron brand name. In 1968 he sold his first 30 petrol stations to Shell, but went on to develop hundreds more sites for Shell, BP, Texaco and under the revived Heron brand, until the late 1980s. Architects John Ward Associates were commissioned to design site layouts and obtain planning permissions using a standard design. The shop, known as a TBA (tobacco, belts and accessories), was flat roofed, with load-bearing brick walls and a steel-framed glass front. This was, however, the least important part of the architectural composition. It was the hovering horizontal of the big cantilevered canopy, combined with the vertical accent of the signpost or totem, that fixed the image of the petrol station in the public's mind. Quite independently of the branding that was applied to it, it became a sign that meant 'petrol' and it means the same to this day [11].

The basic components of the new vernacular building type were now in place. First the 'tank-



10 A Mobil service station of the mid 1960s

11 Forecourt canopy of the early 1970s

12 Norman Foster's forecourt design for Repsol – elegant, but basically traditional



12

farm': several large, cylindrical, double-skinned petrol tanks completely hidden underground and protected by a specially engineered concrete slab. Next the pumps on their islands, laid out in a variety of configurations and spacings according to access arrangements. And then the canopy, high enough to accommodate moderately tall vehicles, steel framed with big cantilevers and supported by columns standing on the pump islands. The canopy may or may not be physically connected to the fourth element, the shop, usually a simple glass-fronted box. And finally the totem, with the oil company's name at the top and petrol prices below, readable from the road. It is a brilliant piece of standardized but adaptable design, a truly vernacular building. All the oil companies use it all over the world. Branding designers may tinker with its details – a differently shaped canopy fascia here, a new shop front there – but the basic concept remains the same. Attempts to reinvent it usually end in failure. In 1995, Italiana Petroli called in specialist petrol station designers Minale Tattersfield to update its image. Initial submissions included a proposal to suspend the petrol pumps from enormous brackets attached to high-tech-styled canopy supports. There were plenty of functional justifications for the design – fewer leaks, easier cleaning, better visibility – but it never got further than the slick coloured perspectives and Italiana Petroli eventually got what they wanted: a new fascia shape, a new totem and some fresh ideas for the shop interior (Minale, 2000).

The petrol station's status as a proper building, let alone a piece of architecture, is dubious but, as we

have seen with mobile homes and American diners, this kind of doubt can sometimes be productive. The modern petrol station is not a single building but a non-hierarchical collection of separate objects. The shop, the only object that qualifies as an inhabitable building, is treated no differently from the totem or one of the pump housings. It is an advertisement, an element in a graphic composition, as well as a functional object. A collection of objects has several practical advantages over a unified building. First, the objects can be combined in different quantities – a bigger or smaller canopy or shop, more or fewer pumps. Second, they can be laid out differently on every site. The objects may be standard, but the possible arrangements are infinite. Lastly, they can be made by different specialist manufacturers. In a typical British petrol station, the canopy will almost certainly be made by Global MSI of Tonbridge in Kent, the shop might be prefabricated by Yorkon or Britspace (the same companies that make McDonald's drive-thrus) and the pumps will probably be supplied by the French company Tokheim. Each of these manufacturers can develop its product independently at its own pace. When a technical advance occurs, such as the invention of the multi-product petrol dispenser or the modular shop unit, it can be accommodated without disrupting the other elements.

When Norman Foster produced a new petrol station design for the Spanish oil company Repsol, he concentrated on just one element, the canopy [12]. Instead of the usual rectangular slab with an extension towards the shop, he proposed a modular umbrella design, like a square version of Mobil's little circular canopies of the 1960s. Foster's umbrellas are extremely elegant forms, their smooth coloured aluminium soffits sloping upwards to sharp edges. The standardized modular design cleverly reduces the number of possible variations – the horizontal elements are all the same, but the columns come in three heights so that umbrellas can be overlapped. To make a bigger canopy you just add more umbrellas. What is remarkable, however, is that even Foster, famous for reinventing building types, did not dare to question the basic petrol station type – a family of independent objects. His totem, shop and



13

13 The petrol station shop has evolved from tobacco, fan-belts and accessories into a full blown supermarket – Sainsbury's Local, London 2004

14 Welcome Break's distinctive entrance canopy



14

pump islands are conventional and the overall spatial relationships remain the same.

Forecourt communities

The form of the petrol station may be settled, but it is not perfect and it has not stopped developing. Other objects have appeared on the forecourt, like cousins of the family. The air and water point, always something of an outcast, now has to fight for its place with the drive-through car wash, a big new object with its own awkward access requirements (JWA Architects manages the design of the 600 strong ARC chain of car washes which are at present prefabricated in flat-pack form, but a modular version is under development). However the biggest changes have been to the shop. Service bays and car showrooms long ago broke off their relationships with the petrol station, but the shop stayed on. In the early 1980s, a petrol glut brought on a price war that

squeezed profit margins and put small operators out of business. The big oil companies realized that they had to revise their corporate aims. For the first time they began to take their shops seriously as profit centres. The merchandise began to change. Tobacco, fan belts and accessories were edged aside by food and drink – chocolate bars and fizzy drinks at first, sandwiches and coffee later. The shops became 'convenience stores' and eventually, in residential areas, late opening mini supermarkets [13]. Turning rates (number of cars visiting per hour) were measured and 'chimney pot surveys' (estimates of the number of households in the catchment area) carried out to assess demand. In the latest phase of this development, oil companies are doing deals with supermarket chains, blurring the boundary between two previously distinct building types. Tesco, for example, is building 150 of its 'Express' stores on Esso forecourts. Are they small

supermarkets or large convenience stores? It is hard to say, but they look perfectly at home in their setting. Like the traditional petrol station shop, they are simple, flat-roofed boxes, boldly branded but with no architectural pretensions. A partnership between Yorkon and Farquhar made the first production run, each shop consisting of either seven or eight steel-framed modules, pushing the size limits for road transport. Checkouts, freezers, chillers and lavatories are all installed in the factory. Basic site assembly can be completed in a day.

The comparison between the petrol station and the parish church is perhaps far-fetched. Of course, a petrol station, a fast-food outlet and a budget hotel do not make a community. But the repertoire of roadside building types is constantly being added to and most of us are spending more time in the environment it creates. There is no need to go to the bank because there is a cash machine in the petrol station. Lunch? The supermarket has quite a decent café. A meeting with business colleagues? The Travel Inn chain recently launched 'Touchbase' offering meeting rooms, lounges and hot desks for hire on an hourly or daily basis in a purpose-made prefabricated building. Shopping? The retail shed park might be more convenient than the high street or the shopping centre. And for evening entertainment there are multiplex cinemas, nightclubs and bowling alleys. Architects and urbanists in America, as well as Europe, mourn the loss of true public space, the substitution of the car park and the food court for the street and the square.

And it is true that in the roadside environment, individual and social behaviour is strangely modified in many small but worrying ways. Try to take a photograph of a motorway services building, for example, and you are likely to be harassed by a member of the security staff. Buckingham Palace imposes no such restrictions.

But roadside buildings have one undoubted virtue: they are built quickly, cheaply and efficiently. They use the best factory-made building components and they take prefabrication for granted. From the one-piece, glass-fibre kiosks of the car park attendants to the huge portal-framed and composite-panel-clad distribution warehouses that loom up like oil tankers over the embankments of the M1/M6 motorway junction in the English Midlands, roadside buildings are industrially produced objects, not built, but fabricated and assembled. As for architecture, they can do that too, after a fashion. It is noticeable that in the last ten years or so, a kind of Modernism has taken over from that old sop to planners, the neo-vernacular style. The latest motorway service buildings [14] have wave-like roofs and tree-like columns, derived perhaps from respectable architectural precedents like Norman Foster's Stansted Airport (the trees) and Renzo Piano's De Menil Museum (the waves). Architects might scoff at the solipsisms, but who is mocking whom? Architecture, these buildings seem to say, is just a sign to be read with all the other, more literal signs. There is no mystery. It's just another kind of branding. Maybe it always was.

Note

1. *Rethinking Construction* was a UK government report produced in 1998 by a committee under the chairmanship of Sir John Egan. Its main aim was to improve quality and performance in the building industry by importing 'lean production' methods from manufacturing.

References

Blake, P. (1979). *God's Own Junkyard*, Rinehart and Winston, New York.
 Gutman, J. S. (2000). *American Diner Then and Now*, John Hopkins University Press, Baltimore, Maryland, p82.
 Jones, H. (1998). *Packaging Petroleum, A History of Petrol Station Design in Britain 1955-95*, MA Dissertation, Royal College of Art, p78.
 Langdon, P. (1986). *Orange Roofs and Golden Arches, the Architecture of American Chain Restaurants*, Joseph, London, p148 and p139.

Minale, M. (2000). *How to Design a Successful Petrol Station*, Booth-Clibborn Editions, London, pp74-93.
 Movement for Innovation (2001). *One Restaurant to Go, Please. M4I Case Study Project 252*, Department of Trade and Industry, London.
 Pawley, M. (1993). The Last Modern Project, *World Architecture*, 26, pp82-87.
 Venturi, R., Scott Brown, D. and Izenour, S. (1977). *Learning from Las Vegas*, MIT Press, London (revised edition).
 Witzel, M. K. (1992). *The American Gas Station*, MBI Publishing, Osceola, WI.
 Witzel, M. K. (1994). *The American Drive-in*, MBI Publishing, Osceola, WI, p34.
 Witzel, M. K. (1998). *The American Diner*, MBI Publishing, Osceola, WI, p81 and p103.

Acknowledgements

The following individuals and organizations provided valuable

insights and information: Andy Atkins of Portakabin; Roy Bentley of BP/Bovis Global Alliance; John Blyde of Blyde Associates; Foster and Partners; Rory McCabe of JWA Architects; Ian McKay, Property and Development Director, Welcome Break; Jamie Thompson of the Association for Petroleum and Explosives Administration; Valiant Diners of Ormond Beach, Florida.

Biography

Colin Davies is a professor of architecture at London Metropolitan University. His latest book *The Prefabricated House* will be published later this year.

Author's address

School of Architecture and Spatial Design
 London Metropolitan University
 40-44 Hollywood Road
 London N7 8JL
 colin.davies@londonmet.ac.uk