

CONTENTS



STEPHEN BAYLEY
ON THE NSU Ro80 Page 100

'Lost causes are fascinating, and this is why the NSU Ro80 and Milton Keynes make such compelling spectacles'

BRAVE NEW WORLD

*1967 was a special year
for cars – and architecture.
Stephen Bayley samples the
NSU Ro80 in Milton Keynes*

Photography Amy Shore

LOST CAUSES ARE fascinating and this is why the NSU Ro80 and Milton Keynes make such compelling spectacles. 'There is no future for the future,' essayist Max Beerbohm once defiantly explained to the Futurist pamphleteer, poet and activist FT Marinetti (who was so car-mad he suggested Venice should fill-in its canals and turn them into roads).

The Ro80 and Milton Keynes are now almost 50-year-old antiques, but they were conceived in a common delirium of Futurist ambition. So much in common, yet so very different. One of the best descriptions of design is that it turns dumb materials into expressive forms. Here are expressive forms located at the polar extremes of aesthetics: a gorgeously sculpted car and an uncompromisingly rectilinear city.

Architecture and car design are essentially similar. As the architectural historian Nikolaus Pevsner said, buildings are 'static controlled environments' while cars are a 'mobile' version of the same thing. How could the technologically infatuated cultures that simultaneously spawned both the Ro80 and Milton Keynes produce such radically different artistic results?

Allow a vision to come into mind. One day in the mid-1970s, two young architects, Stuart Moss crop and Christopher Woodward, set up a laser in the new Milton Keynes shopping building they had designed. As the structure rose above the ground, Moss crop and Woodward were (fanatically) keen to check that its astonishing kilometre-long horizontals were straight and true. No-one has ever had a more fixed idea of what a building should be.

The two young architects had drunk deep at the source. Moss crop, a blunt Yorkshireman, →





STEPHEN BAYLEY ON NSU Ro80



'There is nothing about the NSU's specification or design that is confused, concessionary or secondhand'



had worked in Chicago for skyscraper-masters Skidmore Owens and Merrell, admiring that city's fine patrimony of architecture by Mies van der Rohe, including the Illinois Institute of Technology. Mies had been a director of the Bauhaus and it showed. Straight lines and fine details were his religion. Woodward worked for Peter and Alison Smithson, the modernists who declared that architecture must be all about 'ordinariness and light'. Indeed.

Mrs Thatcher opened the Milton Keynes shopping building on 25 September 1979. It is now Grade II listed and, unusually for a shopping mall, has been unchanged for more than 30 years: a testament to the intelligence and effectiveness of the original design.

Yet Milton Keynes is routinely mocked. Francis Tibbalds of The Royal Town Planning Institute described the centre as 'bland, rigid, sterile and totally boring'. Others see it as beautiful, disciplined, idealistic. Even if there is a whiff of a failed Stalinist state as you leave the station to enter Central Milton Keynes, the effect on *Building Design*, the architects' trade paper, was one of 'austere charm'.

And Milton Keynes was the last city designed for the automobile. It was designated a New Town on 23 January 1967. The idea was to avoid the centralised mistakes of the post-war new towns Stevenage, Peterlee and so on, and return to the idealistic origins of the Garden City movement of Letchworth and Welwyn... but with more roads and better roundabouts. Milton Keynes is a city of semi-autonomous communities and the roads run between them, not through them. In the year Milton Keynes was willed into existence by government fiat, NSU launched the Ro80 at Frankfurt. This was extraordinariness and delight.

How can two such disparate designs have shared the same historical origins? Each, by the standards of the day, was futuristic. Milton Keynes aimed to be the perfect modern city. The NSU Ro80 aimed to be the perfect modern car. If it were relaunched tomorrow, the car would still astonish us with its aesthetic and technical novelty. On the other hand, we will never build another Milton Keynes.

There is nothing about the NSU's specification or design that is confused, concessionary or secondhand. Its curves are gorgeous; its general arrangement bold, but refined. By intuition alone, the designer Claus Luthe (1932-2008) created a body with a drag factor of 0.355, the best of its day. The technical proposition was boggling: its advanced Wankel twin-rotor engine made 113bhp from 995cc.

The glass-house was huge and there was front-wheel drive, unusual in a large car of its day. It was braked by Dunlop-ATE discs on all four wheels, inboard at the front to reduce unsprung weight. *Wunderbarlich*, there was a trick semi-automatic Fichtel & Sachs transmission: an electric switch operated the clutch as soon as pressure on the gearlever was detected. It was comfortable too. The seats were sumptuous and the interior extraordinarily spacious. The original *Autocar* road test said it was 'very advanced and a pleasure to drive'.

With proportions that are both interesting and flawless, the Ro80 still looks fresh and modern. The sole aesthetic error is wheels that do not quite fill the arches. Still, in its ten-year life, it barely altered: the headlamps lost the crease that ran around the body, and the very last cars gained a rubber bumper strip and had the rear numberplate repositioned from below the bumper to between the lamps.

Above and left

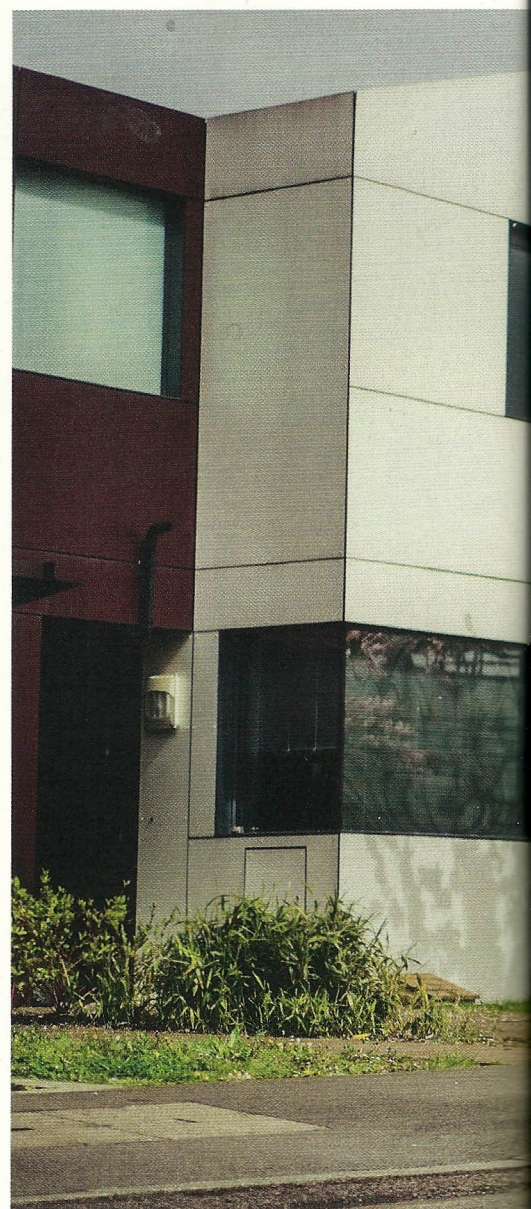
Roly-poly cornering is a given on the Ro80's soft, long-travel suspension, but the pay-off is a comfortable ride.

To savour its radical proposition, remember that, when the Ro80 was launched, you could still buy a Triumph Herald with its crude pushrod motor, cartoon-origami architecture (because Standard-Triumph did not have the metal-pressing technology to realise the curves of Michelotti's design) and murderous swing-axle rear suspension. By contrast, the Ro80 was a very intelligent messenger from another, much more advanced civilisation.

This artistically organic and technically imaginative car had neither predecessors nor successors. It was completely original. In comparison, Milton Keynes had inspirational sources deep in architectural history. Yet while Milton Keynes flourishes, the Ro80 is almost forgotten. How can this be?

Trying to answer that question moves us into the philosophy of history. Art always reflects its own age, but sometimes that reflection can be confusing. If you look at old photographs of Mies van der Rohe's great buildings in 1950s Chicago and New York, it is curious how such formal architectural geometry is at odd with the cars parked outside. The dissonance astonishes.

The Seagram building in New York, so admired by the designers of the Milton Keynes shopping building, is all exposed Cor-Ten I-beams, a building whose coordinates could be readily described on graph paper. And on the street outside, you see curvaceous Packards and Chevys with swooping fins in pursuit of another aesthetic entirely. Yet each was a contemporary product of the Zeitgeist. This troublesome term we get from Hegel, who said: 'No man can



Above
Interior is plain and straightforward
— possibly disappointingly so;
under the bonnet it's anything but.

surpass his own time, for the spirit of his time is also his own spirit.' Maybe, but that spirit sometimes moves curiously.

Now, keeping in mind the image of the two young architects with their laser on a Buckinghamshire building site, consider another image from history. Felix Wankel (1902-1988) joins the National Sozialistischer Deutscher Arbeiter Partei in 1922. That clumping name ('German Workers' National Socialist Party') was later abbreviated to 'Nazi'.

Although a keen hobbyist mechanic and tinkerer — an *Erfinder*, or inventor — the young Wankel was also an overbusy right-wing activist, Anti-Semite and printer's assistant. He had dreamt of a new type of engine that would

be 'half turbine, half reciprocating', and had the general arrangement in mind as early as 1924.

Four years later, Wankel met Hitler and discussed his engine with the Führer, who was alert to the symbolic and practical importance of engineering. By 1931 Wankel was a leader of the Hitler Youth in Baden, although he fell out with the local *gauleiter* and was imprisoned in 1933, only to be sprung by Hitler, no less. In 1940 Felix Wankel, engine *Erfinder*, became an *Obersturmbannführer* in the SS.

Felix Wankel came, like many Nazis, from a humble background. He left school before his final examinations, the German Abitur, but by all accounts had an unusual spatial sense, often a function of un-tutored high intelligence. His engine was patented in 1929 and was designed to obviate the mechanical absurdities of the reciprocating engine in which the pistons reach their maximum speed just before they are

decelerated to standstill at top-dead-centre. Instead, a triangular rotor worked smoothly in an elliptical crankcase. There were fewer moving parts, fewer irrational decelerations. It was a beautiful idea, but there was no available technology to secure the integrity of the tip-seals at each apex of the rotor. Today, titanium carbide, an ultra-strong metallo-ceramic composite, would create a seal with integrity, but no such thing was available to Wankel.

Consequently, Wankel engines always burnt oil and soon failed. This was ironic since Wankel himself spent the Second World War working on high-integrity seals for Kriegsmarine torpedoes and for Daimler-Benz and BMW. By 1957, however, Wankel, under contract to NSU and working from a lab in his own home at Lindau on Lake Constance, had a credible working prototype of his engine. Eventually Mazda, Daimler-Benz, Rolls-Royce, Alfa



Romeo, Toyota, Ford and Suzuki each took out Wankel licences, but only the struggling NSU committed to production.

In 1963 the NSU Wankel-Spider, a cute but awkward little thing, became the first-ever car with a rotary engine. NSU management now wanted a unique mid-size saloon with this same power source. Four years later, in August 1967, when Harold Wilson's government, in its white-heat-of-technology moment, gave the go-ahead to Milton Keynes, NSU launched the Ro80.

Claus Luthe was one of history's most extraordinary car designers, a man whose reputation is dimmed only by the atrocious fact that he murdered his drug-addled son. At Deutsche Fiat, he had been an influence on the design of the *nuova cinquecento*. He soon moved to NSU, where the 1961 NSU Prinz 4 brought a little of Detroit to the *Kleinwagen* market. Luthe's inspiration was Ned Nickles' Chevrolet

Corvair, whose distinctive, sharp beltline also influenced the shapes of the BMW 1602, the Fiat 1300 and the Hillman Imp. The Ro80, too, had a notable crease along its hips. Delightful to think that this detail had its source in the Advanced Studio of The General Motors Tech Center in Warren, Michigan. These cross-currents make the study of car design as absorbing as the mapping of weather systems.

If there is any disappointment in the design of the Ro80, it is that the original and daring glass nose had to be abandoned because of legal requirements, although a memory of it appeared on the Citroën SM. Luthe had proposed an instrument binnacle as advanced as the car's exterior but, on cost grounds, it was replaced by an incongruous and artless plank.

So, braced by the exhilarating linearity of Milton Keynes, I climbed aboard a Ro80, something I had wanted to do since seeing one

as a boy. Of course, old cars acquire a particular smell: that once-sumptuous velour carries olfactory ghosts. Still, the chairs are comfy and visibility is perfect, although, ergonomically, you feel you are sitting on the car rather than in it, but that's the swinging 1960s for you.

There is a base-note of unburnt petrol and I begin wondering if the thin, black, shiny and large steering wheel has an aroma of its own. There is a choke but the Wankel motor starts easily, although by the standards of 2016's reciprocating engines it does not seem specially smooth. Power delivery is, however, seamless and, if the three-speed gearbox graunches a bit, the lever's electric knob works much better than most devices that are half-a-century old. Ride is smooth and authoritative, although there is a lot of roll even at gentle cornering speeds. Still, it's a fine thing to know what the future used to feel like.



Below

Stephen stands with the Ro80 outside Central Milton Keynes station. One celebrates curves, the other the cube; both are contemporaries.



I was left wondering whether the Ro80 was the end of something or the beginning of something. TS Eliot came to my mind: 'Time present and time past/Are both perhaps present in time future.' The historical facts are confusing. In 1969 Volkswagen acquired NSU and merged it with Audi. Claus Luthe soon designed the very origami NSU K70, which then, as NSU died, became the Volkswagen K70, establishing that company's design language for the next decade. Then, Luthe's Audi 50 became the basis for the VW Polo. He left for BMW and drew the standard-setting 5-series and the still-dramatic 1989 8-series.

Ten years after Mrs Thatcher opened the Milton Keynes shopping building, she opened Terence Conran's and my Design Museum in Butler's Wharf. Stuart Mossdrop was the architect. 37,398 NSU Ro80s were built in the car's ten-year life. Alas, there is not a single one of them in the museum's collection, but if I had to choose one car that connects all strands of design – sculpture, technology, innovation, an expression of the Zeitgeist – into a single memorable entity, the Ro80 would be it.

As for the future, let's look again to Eliot: 'In my beginning is my end. In succession/Houses rise and fall, crumble, are extended/Are removed, destroyed, restored.' Milton Keynes is doing fine. Ro80, RIP. 'What might have been is an abstraction/Remaining a perpetual possibility.' Poets always get it right. **CMB**

1974 NSU Ro80

Engine 995cc (rated as 1990cc) twin-rotor Wankel, twin Solex carburetors
Power 113.5bhp @ 5500rpm **Torque** 117lb ft @ 4500rpm **Transmission** Three-speed semi-automatic, front-wheel drive **Steering** Rack and pinion, power-assisted
Suspension Front: MacPherson struts, lower wishbones, coil springs, anti-roll bar. Rear: double wishbones, coil springs, telescopic dampers **Brakes** Discs, inboard at front **Weight** 1211kg **Performance** Top speed 115mph. 0-60mph 10sec

