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Alison and Peter Smithson for the extension of the University of Sheffield.

A language of architecture in between, drawings and words

Abstract

The project for the University of Sheffield extension delivered by Alison and Peter Smithson in 1953 – the first in a long series developed by the British couple on the subject – represents a significant clue to interpret the basics of a rethinking in the language of architecture. The fervent period of post-war British reconstruction – and especially in the university building sector – afforded a rich opportunity for British architects to question themselves on the role and meanings to be sought and attributed to architecture. Through a crossover study involving both the plans and the written descriptions proposed by the authors themselves, the competition entry provides a lens through which to interrogate, decode, and interpret the formulation of an architectural language for the Smithsons with an unremitting antagonism between formal choice and theoretical intention.

Keywords

Smithson — University — Language of Architecture

Introduction

By the end of the Second World War, Great Britain had recorded extensive damage to over 20% of existing school buildings (of all types and levels) largely due to German aerial bombings (1940-'43), making school buildings a priority chapter in subsequent national reconstruction policies and operations (Harwood 2010, pp. 63-73).

Specifically, public spending and the interventions promoted by Whitehall for the restoration and construction *ex-novo* of universities, which began in the 1940s and lasted well into the 1970s, contributed to fuelling a season of remarkable and particularly significant architectural production. As Nicholas Bullock recalls, the architectural historian John Summerson was to recognize this season as an extraordinary spirit of ferment, capable of identifying “a tendency to go in search of principles”, principles which, to some extent, could be “announced as buildings”, and which James M. Richards would later define, among the pages of *Architectural Review*, as the face of a new, all-British architecture (Bullock 2003, p. 48).

Studied, categorized and partly historicized (- 1963; Webb 1969 pp. 7-63; Brawne 1970; Muthesius 2000, pp. 59-186), the many examples that make up the extensive taxonomy of postwar English university buildings must be observed attentively as a profound change that was both programmatic – within the universities themselves – and social (Historic England 2017, pp. 6-15). On the one hand, the university institutions were beginning to feel the need to rethink their traditional structures, involving above all the functional programme and consequently the birth of new sectors of specialization within the faculties that constituted them, and on the other, a substantial increase in enrolments in tertiary-level education – which more

than doubled between 1961 and '77, thanks especially to the new tools of public economic assistance (in fact the first University Grants Committees as well as Maintenance Grants were set up in the early 1940s) and spatial solutions to be offered to the larger university communities (Id.).

A year before completing construction of the *Hunstanton Secondary School* (1949-54) – later to enjoy international fame – and while they were busy developing the project for the *Golden Lane Competition* (1952-53) and the installations for the *Parallel of Life and Art Exhibition* (1953), Alison and Peter Smithson formulated the first of a series of works around the theme of university architecture: the project for an extension to the University of Sheffield¹.

The competition and Alison and Peter Smithson's project for Sheffield

The 'redbrick' university of the city of Sheffield – in South Yorkshire – was formally founded in May 1905 when, by concession of a Royal Charter, three pre-existing local institutions were merged. The oldest, the School of Medicine founded in 1828, was incorporated at the end of the 19th century into Firth College, opened on the initiative of a steelmaker Mark Firth, and Sheffield Technical School, originally founded in 1884. While the first two, housed in the Firth Court complex in the Western Bank area of the city, brought together the arts and medical-scientific disciplines, the third – which occupied an old grammar school in St. George's Square, one kilometre further east – was designated as a centre for teaching applied technical sciences. The characteristic of being born from the merger of three independent, pre-existing Colleges had a particular impact on the university's physical growth as separate teaching centres, and over time, these would come to identify two main academic poles. During World War II, many of the school's available rooms were converted into research laboratories to develop new cartographic surveying techniques, novel technologies such as radar and innovative chemical products, and therefore required initial adaptations and expansions, without a recognizable, coherent overall project, however. Come the end of the war, the increase in the number of students enrolled in courses – as well as those expected for the years to come – forced the institution to organically rethink both its administrative system and its premises, which were scattered throughout the city. In 1947, a specialist committee was set up with the aim of guiding this rethinking and identifying possible areas of the city to be acquired for future transformations. As a result, the main spatial and functional needs would also be outlined by this same committee in the early 1950s: new departments of Chemistry and Physics were deemed necessary; the Western Bank Art Centre was to be completed; a new School of Medicine built, along with a Library, a public centre dedicated to the Student Union, a new Great Hall and an administrative building, all of which led the university to hold a public competition to collect ideas and build the winning project².

«The older universities are textbook examples to show that human organisation can realise itself in built-form as a 'thing'. That is, they are comprehensible as a whole, more than the sum of their parts built up through a clear language of form, and potentially capable of endless renewal [...]. But in this century they have failed to renew themselves physically. [...] New buildings should show by their 'scale in change' the 'size in change' of the whole complex; yet still indicate limits. And their aesthetic should be an 'aesthetic of change' [...]. The project we made in 1953 for the University of Sheffield show the new aesthetic technique in action» (Smithson 1957, p. 17; republished in Smithson 1970, *Aesthetic of Change*, pp. 154-157, p. 157).

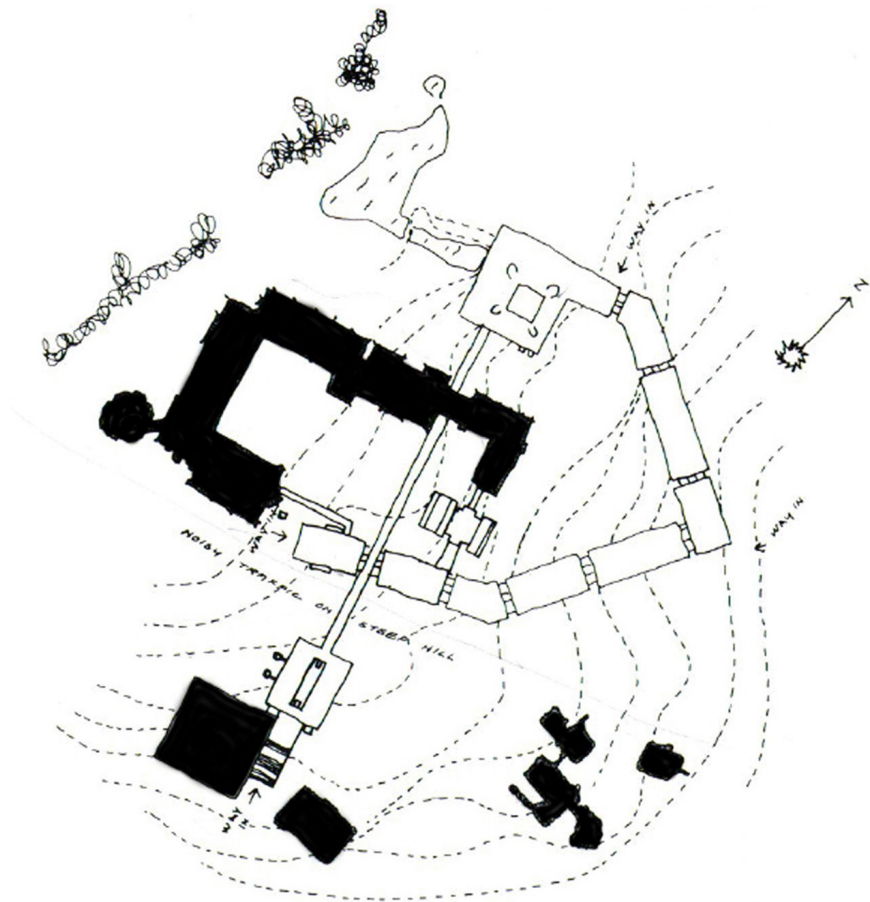
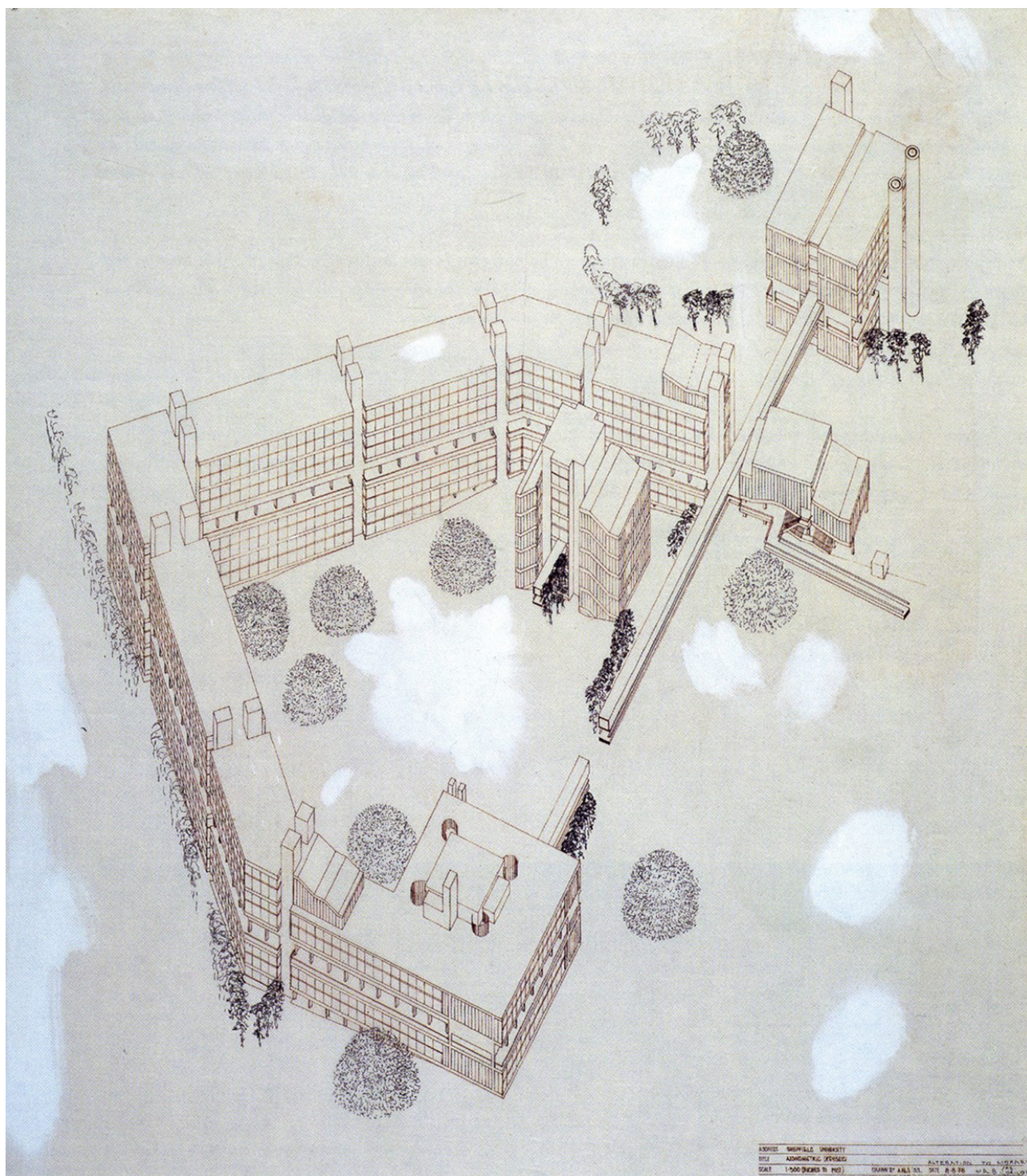


Fig. 1

Sketch of the general layout for the 1953 competition entry (re-working of a drawing by Alison Smithson – 1978 – for the publication of the 1979 book *Alison and Peter Smithson. Due progetti*). Blacked in (by the author), are the Firth Court structures to the north and other minor University buildings to the south; in white, the additions of the Smithsons' project [Source: Smithson 1979, p. 7].

In an article published four years after delivering their competition entry, the Smithsons presented the general objectives underlying their proposal thus³. The overall area made available, and described by the brief, consisted of free land to the east of the Firth Court building (between the current Brook Hill / A57 and Bolsover St. further north), and another smaller lot on the other side of the artery (Brook Hill itself) further south.

The Smithsons' general layout included a wing divided into three parts along the profile of the available area, ending in a square-plan building at the furthest point north. The latter, positioned behind the existing wing (the most recent extension of the same university), was connected – via a straight suspension bridge in a southerly direction – to the planned block across the road. All the functions and activities indicated in the development plan drawn up by the university found a specific location in the project. Those characterized by highly specialized functions such as the theatre, the library, the art rooms, the communal areas for students and the entrance hall, were formally distinguished and characterized. The more conventional spaces, such as the administration offices, departments, laboratories, and study rooms, were instead placed along the modular development of the long C-shaped wing which closed off the lot towards the east. The project envisaged keeping the main access near the original entrance – but now via a grand staircase – which would resolve the differences in height between the street level, the innermost one of the open space, and the height of the suspended public walkway – the so-called 'deck' – higher up. Distribution throughout the entire complex was organized and guaranteed through the horizontal development of a continuous open pathway – the deck again – which horizontally and physically connected all the parts included in the general scheme: after the entrance came the administration offices, then, passing through the departments of Chemistry and Medicine

**Fig. 2**

Axonometric projection of the complex for the University of Sheffield extension (reworking of a drawing by Alison Smithson and Wally Banks, 1978). Remodelling of the university quadrangle and relationship of the project with the orographic and physical aspects of the context.

[Source: Smithson 2001, p. 109].

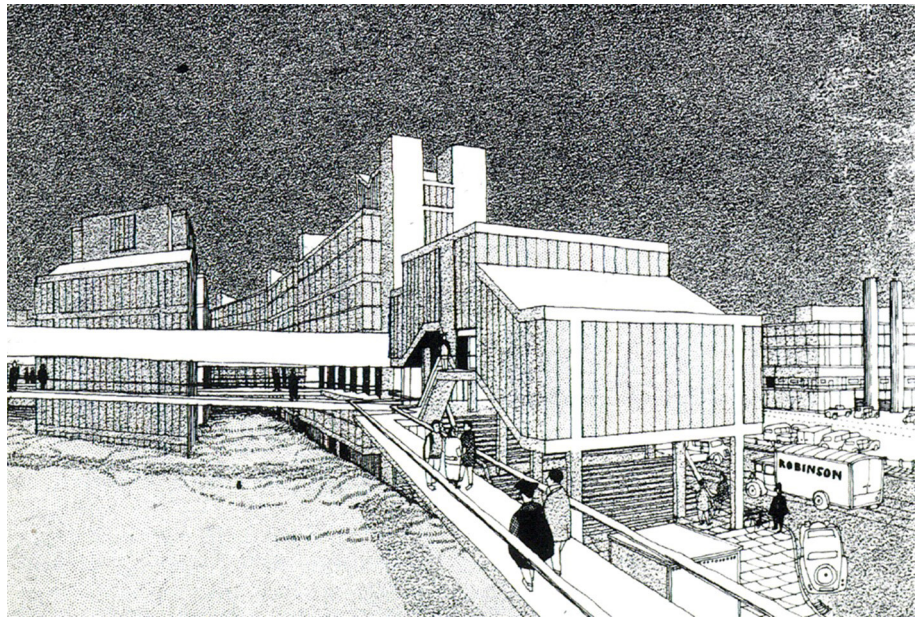


Fig. 3

Perspective view of the new entrance stairway, surmounted by the Arts Theatre, seen from the lateral pedestrian ramp connected to the older Firth Court structure. In the background, the long line of offices and departments that 'unfolds' from the entrance and is connected to the block of terraced classrooms, while the suspension bridge in front of the Library leads – across the road – to the Student Union on the left (drawing from 1953).

[Source: Smithson 1997, p. 36].

(in the eastern corner), there was the northernmost section with areas dedicated to the School of Architecture and ending with the Library building, to then meet the suspension bridge which closed off the route with the Student Union block across the road to the south.

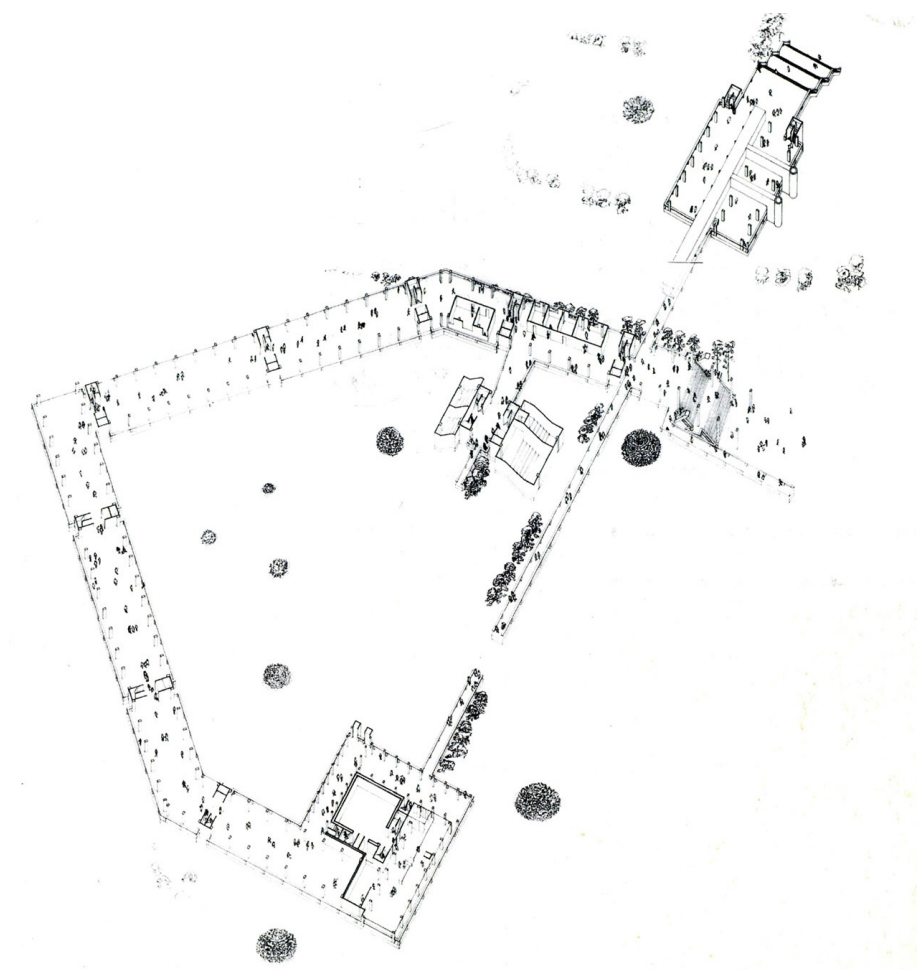
«This idea looks forward to the inevitable 'growth and change' of an expanding university: the ring of high-level circulation and service in a continuous building complex makes it possible to satisfy the university's desire to extend horizontally rather than vertically, in spite of the huge volume of building» (Smithson 2001, p. 108).

The pedestrian walkway of the deck, open on the two longitudinal development fronts, gave access, both above and below, to all the functions envisaged by the project, representing a permeable, continuous, and common plane at about half the height of all the elevations of the buildings making up the scheme. Furthermore, by occupying (and emptying) an entire horizontality, through the deck it was possible to read the main load-bearing grid which uniquely characterized all the buildings planned, made further visible by means of the walkways and distribution towers which extended beyond the line of the flat roofs, and bringing rhythm by announcing the possible access points in repetition.

The reinforced concrete structure consisting of pillars – 40x75cm – arranged every 5.5 mt and the slabs (every 6m in height) made from transverse beams – 11 mt long – which protruded 1.8m from the edge of the columns, represented the main non-modifiable framework, called to host at the various levels a secondary system – light, and in steel, along the edge of the cantilever – which in turn arranged two levels for each floor identified by the concrete slabs. The façade infill panels, which made the double system clearly legible, could be transparent – identifying windows and other openings – or opaque – in wood or metal – depending on the functional needs of the interior spaces to be closed or screened off.

As the architects themselves would specify in the project report:

«The external and internal panel system can mesh in completely with the internal organisation of the building: when this organization alters, the façade panel system is also altered, thus continuing to give complete identity to the internal disposition» (Smithson 1979, p. 9).

**Fig. 4**

Axonometric section of the deck distribution device (reworking of a drawing by Alison Smithson and Wally Banks, 1978). Raised above ground level, the deck unravels continuously from the stairway of the new entrance to the stairway of the southernmost Student Union block.

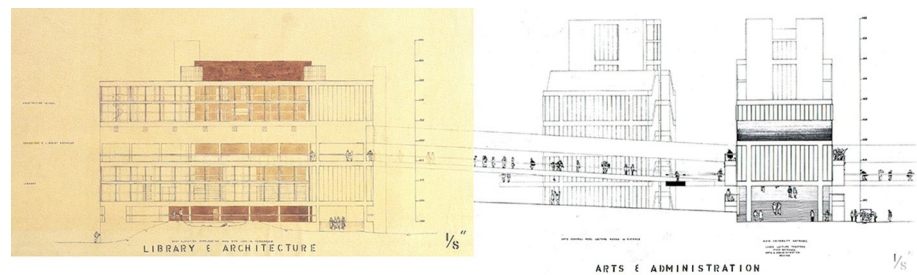
[Source: Smithson 2001, p. 113].

Resonance between drawings and words: Architecture as a language ‘in between’

The broken horseshoe shape of the university project represented a brand-new innovative solution for the Smithsons: «Sheffield is the first of the ‘encompassing’ buildings whose slightly angled forms seemed at the time – and still seem – so much another invention from the twigs of Golden Lane» (Smithson 2001, p. 108). The C-shape, borrowing the introverted and traditional organization of the university quadrangle, renewed it by establishing a dialogue deemed necessary with the neighbouring pre-existing buildings.

While limiting and defining the available space, the complex chose not to end in itself but sought, through the permeability of the open deck, a relationship with both the historic Firth Court to the west and the city that surrounded it on the eastern front, in a conformation that was ‘wrapped’, yet open⁴. Looking back and expressing a sensitivity that we might define ‘topographic’, the wing was to be broken, conforming to the trend dictated by the two roads which surround the area and converge in the University Square – where the building is bent to form an angle – proposing itself at the same time as a physical limit of the project and a barrier to protect the flow, calm and free, not only of the students but of all those who, arriving from Weston Park to the west – passing beneath the overhead bridge – decided to traverse the green field by entering the university’s open quadrangles.

The physical gesture, which simultaneously demonstrated an intention of protection (from the surrounding traffic) and openness (for the new university system), was further elaborated by including in the project (through an orographic study this time) a relationship of dependence with the sloping

**Fig. 5**

Joining together (by the author) of the north-west elevations of the Library and School of Architecture (left) and the main access stairway surmounted by the Arts Theatre (right) by the connecting suspension bridge, populated by students and teachers in transit. The grid of the main structure (concrete slabs and pillars) is clearly legible, as are the intermediate modules which can be modified (made transparent, for the Library, or opaque, for the Arts Theatre) following and declaring, over time, the transformations of the uses of the internal spaces of the university.

[Source: Smithson 2001, p. 112].

curves of the land from which to begin. The natural reduction in height from west to east was emphasized by the contrast with the deck level, kept at a constant height, while the space left free by the ground was occupied by filling it with the modules of the main supporting structure. A sloping trend which, in essential collaboration with the built environment and the spaces left free by it, to some extent encouraged and ordered the movement from outside to inside, and vice versa.

«This gesture makes clear that the central space is no longer a traditional quadrangle of an English university. Sheffield is a piece of city unto itself: self-protective, energising, offering connection, and so on» (Smithson 2005, p. 175).

At the same time and in a substantial solution, the deck distribution device was imagined as a continuous system with the intention of connecting the different buildings and in so doing ensuring uninterrupted circulation throughout the system. As anticipated, it was essential for the architects that the ‘elevated pedestrian street’ was open on both sides, allowing maximum permeability onto both the city and the central green area, engaging further with the suspension bridge connecting the Library and the building for the students located across the road.

«To keep the connective route of the pedestrian deck always busy» – as much as that of the park which acted as its counterpoint – Alison and Peter identified and imagined four poles – distant and distinct from one another – in which to deploy the main activities of greater specialization, entrusting to them the specific objective of triggering, activating and reactivating over time – as if they were magnetic points – the chaotic and random movement of students, researchers and professors who would occupy and live them to keep the connective route of the pedestrian deck always busy. (Smithson 2001, p. 108).

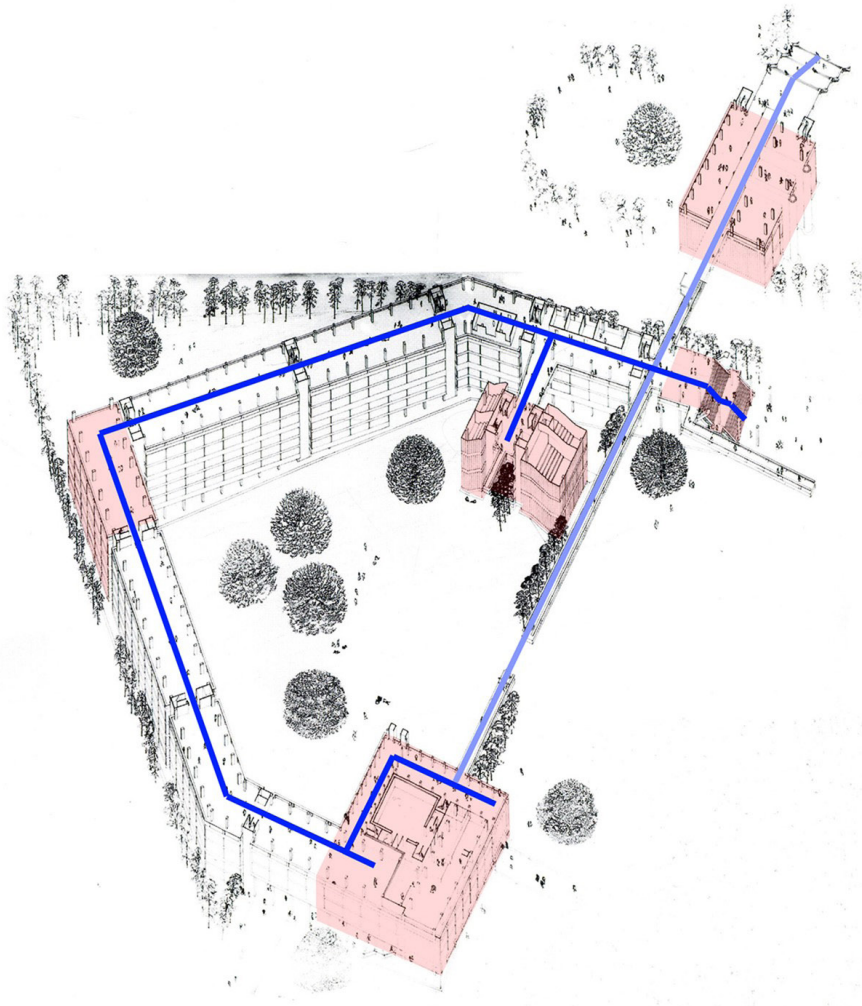
In particular, along the west-east axis, the entrance point surmounted by the Arts Theatre acted as a counterbalance to the more frequented departments of Chemistry and Medicine located at the eastern corner, while at the extreme north and south, the large Library – beneath the School of Architecture – was counteracted by the Student Union building. The cross-shaped conformation of the four poles, as the architects themselves explained, was to set in motion the movement – continuous, differentiated and circular – which would have the continuity of the aerial deck as a privileged means of travel.

«The growth and change of Sheffield can be seen – in retrospect – as layers of strengths; of permanence and transience. Le Corbusier’s earliest studies had the simplest regular concrete frame with free-form walls. [...] [Hence] the need for another sort of language indicating possibilities of accretion or adaptability» (Smithson 2001, p. 110).

Fig. 6

Axonometric section (reworking of a drawing by Alison Smithson and Wally Banks, 1978). The poles to steer the flows are shown in pink (from top to bottom: Student Union; access stairway surmounted by the Arts Theatre; the block of tiered classrooms; the departments of Chemistry and Medicine; the Library and the School of Architecture), in dark blue the route at the deck height, in pale blue the straight line of the suspension bridge connecting the buildings of the Library – below – and the Student Union – above – crossing the main entrance to the buildings (coloured by the author). The Smithsons describe the axonometry at the level of the deck, and the underlying scheme as if twenty years had passed since their creation: trees fully grown and spaces populated by students who are passing to and from the classrooms, between the Library and the recreational area of the Student Union. From beneath the buildings, Weston Park – following the natural swell of the land – flows into the areas enclosed by the old and new buildings. Looking from the top of the distribution ring towards the green centre, the circulation seems ‘turned off’, ‘weakened’, to fully appreciate the calm and protected position of a university immersed in the city.

[Source: Smithson 2001, p. 111].



For the University of Sheffield extension project, while looking at (but developing) the image of Le Corbusier's ‘rack’, the Smithsons' objective was the pursuit – and material construction – of a building capable of transmitting, albeit thanks to its physical presence, the ephemeral sense of a changing identity; that of a university in continuous modification, evolution and change. Therefore, the uses it would be put to and the variations it would inevitably undergo over time, represented a design opportunity which for the Smithsons had to become central and clearly legible by means of the changes that could be wrought by and to the buildings. By transforming and reconverting portions of the new blocks in the future, and consequently modifying the free modules of the façade included in the fixed concrete structure, the variations would be the physical sign – capable of going beyond the project itself – with which the structure and the façades of the university turned towards the city would be able to communicate their transitory and modifiable character. Consequently, for Alison and Peter it was «clear that the building's identity [in Sheffield would be given] by patterns of use and not [just] by ‘design’» (Id.).

As we have seen, in order to understand – and penetrate – the meanings and intentions which the project for Sheffield incorporated and intended to rep-

resent, it is necessary to move – within a continuous comparison of explicit and implicit references – between the drawings that the Smithsons compiled for the competition and their writings which accompanied the project. A necessary circular, two-way ‘movement’ between drawings and words. The new scheme for the University – the C-shaped structure in particular – clearly represented the expression of a renewed gesture in the field of a given, established and settled formal language: the closed quadrangle of British colleges. But that was not all. «Their shape must not only be able to ‘take’ change, but should imply change», representing as it did, for Alison and Peter, a transition, a more general change which the institution would be called to face at that time, which it must necessarily measure itself against and which therefore must – not only abstractly – favour and guide it (Smithson 1957, p. 15; Smithson 1970, p. 157).

The unitary and complete form of the old systems was now conceived as the collaboration of several distinct parts. A single building – the old college – must now deal with a polycentric structure, but in a coordinated and to some extent hierarchical system of flows. As Mark Crinson has pointed out, the Smithsons’ project for Sheffield was based on the idea that space and constructed form «are given unexpected relations when generated by flows of people rather than as containers of functions», in a new «system of relationships and forces» activated by users and their movement (2018, p. 18).

Once again, the formal choice was counterpointed by meanings which pertained to the theoretical field of intentions. The question this time involved the concepts of *scale* and *city*. For the Smithsons, «In classical aesthetic theory the part and the whole were in a finite relationship one with the other, the aesthetic of each being ‘closed’» (Smithson 1957, p. 17; Smithson 1970, p. 157). Indeed: «the original colleges were closed communities of individual rooms with a common hall and chapel» where the relationship between the individual and the community was reduced «by a complex of in-looking courts, with one point of contact between the rest of the world and the college» (Ibid., p. 16; Ibid., p. 155).

In Sheffield the intention was instead to open and expand this relationship, because «in modern times more and more teaching is done by the ‘University’ – by the various ‘faculties’, and the relationship with the town [sic] has become more open» (Id.). A polycentric structure therefore – like the city – which had the complex facing the world, both physically and conceptually, towards the city, and at the same time towards dialogue and internal confrontation, in a virtuous mutual exchange.

As observed for the general layout, also the system of flows imagined for the project and the structural solutions identified can be read according to a double interpretative key, between the formal results – provided by the drawings – and the conceptual and theoretical intentions – expressed by the words.

The conventional distribution scheme of corridors and passages inside the buildings was completely overturned, this time with a clear and always recognizable form. A continuous walkway – the deck – which, running both internally and externally, identified an uninterrupted path between the parts making up the new University. For the architects, the complex of buildings which characterized the proposal «must establish a ‘flow’ relationship to the whole pattern of movement of the university and town [sic]», and, «as a ‘people-aqueduct’ carrying both students and services to ‘draw-off points’», represented by the formally characterized poles (Ibid., p. 157; also in Smithson 2001, p. 108). A movement displayed, exposed, to declare the

ferment and action that must represent an institution which is never still and is continuously questing. A movement which, in unbroken interdependence, involves both the university and the city of which it is a part.

In addition to renewing a distribution device, the deck is developed as a privileged tool for connecting the parts – the poles – which represent the new system offered by the project. An expanding university just like the city of Sheffield, while the «‘separate’ parts of the complex implies their ultimate linkage, and their detailed aesthetic is one of change» (Ibid., p. 157). A refined connection recalling the collaborative spirit which a place where knowledge and culture are generated must be able to demonstrate, a connection also expressed by the different parts of the city that must be able to collaborate and coexist in a harmonious and circular system.

The solid and durable built language of the old redbrick university in Sheffield is renewed through the introduction of a double construction system, as seen above, one in concrete, which cannot be modified and constitutes the backbone of the intervention, and one of a lighter order, made up of panels (in metal, wood or glass) which close – or open – the buildings as required. For the pair of architects, the «external and internal panel system can mesh in completely with the internal organization of the building», indeed, was expected to do so that the internal space and its own variability could help define the identity of the entire building (Ibid., p. 157; also in Smithson 2001, p. 110). A university identity recognized as constantly changing, according to the evolutions and needs dictated by contingent time. An identity which must offer itself ‘transparently’, declare itself explicitly and clearly, just as the institution it represented must be clear and limpid. A double system which, although based on a solid structure – a redbrick university – could at the same time convey a message of flexibility and transience at that point unavoidable.

Alison and Peter Smithson’s language – as it is possible to observe in the Sheffield competition project – was one of an architecture that could not be fully decoded except in the whirling, mutually interdependent dualism which the formal language expressed by the *drawings* established with the intentional language expressly stated by the written *words*. However, the activity of *drawing* and *writing* about the architecture that the Smithsons imagined, should be considered as much a communication tool aimed at the world – and the possible interpretations deriving from it – as an essential, intimate tool for the architects, activities that they obsessively strove to merge throughout their careers; after all, as David Dunster pointed out, the «Smithsons are, as it were, always in the laboratory» (Smithson/Dunster 1982, Foreword, p. 7). Alison and Peter’s drawings can exist without their words, certainly, but only partially, in otherwise impoverished and reduced meanings: it is the interference and mutual resonance that the two communicative registers are capable of offering – and therefore only if considered at the same time – which provide useful tools to read a complex language, the architectural one, whose understanding is offered to the reader’s interpretation⁵. A ‘linguistic relativity’ which is perhaps useful – albeit simplistic – to take us back to Humboldt’s theory according to which «language, understood in its true essence is not a work (*ergon*), but an activity (*energeia*)», thus suggestively recalling the concept encountered of ‘aesthetics in action’ to which the Smithsons referred in describing their project for Sheffield University (1974, p. 408). An active process, therefore, a language which the Smithsons themselves recognized as having the

power to «set up a dialogue between object and users», that is, an exchange which cannot be resolved and concluded with time, but is always renewing itself, changing, because for Alison and Peter there «[existed] a secret and permanent life in things solidly established and intensely made, that come alive for other uses, other generations», in a process of unstoppable change that can only be assisted (Smithson 1973, p. 77).

The interpretation and attempt at decoding entrusted to those who intend to grasp the Smithsons' work – as Christine Boyer has illustrated – must begin from the awareness that the writings of Alison and Peter «speaking into the void in full acknowledgement of the indeterminacy of words released into the air» and that at the same time, «there is something about architecture that cannot be said, something that cannot be transmuted into the printed word, focused photograph, built form». An interpretation which «[requires] a flexible, associative, and many-layered form of reading», since all their works «were in essence architectural and architecture, in turn, was never just about buildings», works able to speak a language which is not said, something that is *not quite architecture* (2017, pp. xiv, xii, 389).

A *not-just-architecture* which Max Risselada briefly outlined – borrowing the Smithsons' own words – is capable of identifying and representing:

«A 'space between' (...) present in more imaginative sense as a 'space that is left open for interpretation'. This space is often the result of the confrontation of seemingly different types of ideas and concepts, which are set in relation to one another practically unmediated and therefore arouse curiosity. (...) There is always a 'distance' between text and project - a space open to one's own interpretation» (Smithson/Risselada 2017, pp. 260-261).

The *space between*, open and fluid which – speaking personally – can be recognized in the virtuous antagonism between *drawing* and *word* appears to represent a 'field of action' within which we are called to move, decode and interpret the *language of architecture* of Alison and Peter Smithson. A suspended 'space' – but always and forever available – *in between*.

Notes

¹ The young couple of English architects were to work actively, and for a long time, around the theme of university architecture – thereby defining a personal rethinking – and developed numerous projects in just under forty years: from the competition for Langside College in Glasgow (November-December 1958) and Churchill College of Cambridge (1959) to the project – built – of the Garden Building for St. Hilda's College in Oxford (1967-'70), from the general scheme for Queen's College (October-November 1971) to the reticular structure of the extension to Magdalen College (June-October 1974) both for the University of Oxford, to then elaborate and carry out – over a period of more than twelve years – seven separate projects for the University of Bath (1978-'90).

² The Smithsons did not win the competition. The first prize went to a project by the GMW & Partners studio (Frank Gollins, James Melvin, Edmund Ward), founded in 1947, which was built and completed by the late 1950s (the Library, now Grade II* listed, was opened in 1959).

³ The article, published in the pages of the periodical *Architects' Year Book* in '57, would then be republished in the second part of the famous volume *Ordinariness and Light* of 1970. More than twenty years after the competition, Alison and Peter would go back to the drawings for Sheffield and – together with their subsequent project for

Churchill College (1959) – would publish them again in the book *Due Progetti* [“Two Projects”, t/n], published in Rome by Clear in 1979.

⁴ As the Smithsons themselves would have the opportunity to clarify during the lessons held in Italy from 1977 at the ILAUD of their friend Giancarlo De Carlo – in describing the project of the Wokingham Infants School (1958) shortly afterwards – the careful choice of preferring an ‘open’ conformation in the architectural project could be the winning solution if the desire is to “create places” and not be limited to the construction of closed and characterless spaces (Smithson 1993, p. 43).

⁵ The meaning referred to the term ‘complex’: from the Latin *cum-plexum*, “with knots”, i.e., whatever presents knots – like a tangle of threads – is difficult to understand except in the complexity and interconnection of their own intertwining and in the relationships that they establish with respect to one another. The term ‘complicated’, from the Latin *cum-plicum*, “with folds” is different. Whatever has folds – like a sheet of paper – and which lends itself to a possible understanding through the opening of these folds when ‘unfolded’, allows us to perceive and grasp the entirety of what is being observed. That which is complicated (with folds) can therefore be linearly ‘unfolded’ (See Ottorino Pianigiani, *Dizionario Etimologico della lingua italiana*. Roma, Società editrice Dante Alighieri 1907 [republished online: etimo.it], s.v. ‘complesso’; s.v. ‘complicá-re’).

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