In the mid-1950s, a group of young faculty at the University of Texas School of Architecture in Austin – aka the Texas Rangers – entertained themselves with weekly sessions of a sophisticated, collective drawing game, ‘Dot-the-Dot’, in which there was an emphasis on inventive fluency in hand drawing as well as an innate knowledge of historic European city plans. What happened when Mark Morris, Visiting Associate Professor at Cornell University, decided in a design studio to ask present-day students to revive the game?

Bernhard Hoesli, Colin Rowe and other members of the Texas Rangers, Dot-the-Dot drawing, c 1956

All’s well that ends well? Such drawings grew over the course of a late night. For as much as they were an index of each individual’s participation and intoxication, the results were fairly cohesive; a graphic representation of E pluribus unum.
A charming if improbable scene: bright young architecture faculty huddled together in the middle of the night, probably drunk, drawing together. Doodling on one large sheet of paper pinned to the wall, a quickly growing urban plan takes form where recollections of real buildings merge with unreal fragments forming connective tissue (sympathetic landscapes, ameliorating vestibules, forced-perspective alleys) and collide against other agendas as fresh authors dig in. This is what academics did for pleasure before the Internet.

Colin Rowe, Lee Hodgden, Robert Slutzky, Bernhard Hoesli, Werner Seligmann, Lee Hirsche, John Shaw, Jerry Wells and Hejduk – the bulk of the group that would come to be referred to as the Texas Rangers – invented this drawing-in-the-round game at the University of Texas School of Architecture in Austin in the mid-1950s as part of a Thursday night ‘seminar for faculty’. Referring to the game as ‘Dot-the-Dot’, the group would loosely abide by exquisite corpse rules, taking the drawing in turn and adding to it by extending the logic(s) of the preceding efforts. No erasure, no editing, just thoughtful additions. The joy was had in working through contingencies. There must also have been some pleasurable one-upsmanship in terms of the erudite plan quotations one could muster off the cuff and how much one could interpret, extend and merge precedents. Scale did and did not matter. The whole was certainly meant to appear at a roughly consistent scale, but the scale of individual ‘buildings’ could vary wildly provided the resizing was in service to synthesis; a Roman basilica could better merge with a plan of a Le Corbusier villa with scalar leniency.

Exactitude was not the point. In fact, it would have destroyed the effort. This is very much a sketch where the vagaries of a pen in different hands were part of the required ‘fuzziness’ of the project. It did not hurt that Rowe’s war injury from his brief career as a paratrooper provided the requisite visual wobbliness naturally. In other words, inexactitude was necessary if synthesis among all the authors and all the precedent fragments was the goal. Straight lines, hard edges and 90-degree corners would have constricted too much. Within such a loose framework, one could enter and exit the drawing, pass the baton, without too much individual graphic residue. Some effort was made to poché the walls and columns to distinguish them from other lines marking open porches, terraces and garden walls. The landscape as well as paved piazzas and streets are stippled. Water is hinted at with wavy lines. Trees are mostly small and circular, but occasionally larger and amoeboid. Tile paving patterns are suggested. Dashed lines show cross vaults and the ribs of domes overhead. Black and white, figure and void, are agreed economies and key restrictions permitting the authors and architecture to jostle yet read as whole.

Where did Rowe, Hodgden, Hoesli and company get the idea? Their exquisite corpse plan shares graphic themes with any architect’s sketchbook where different ideas and kinds of drawing feature on a given page. Think of the travel sketchbooks of Le Corbusier, for example, and the sheer density of little plans, sections and rough perspectives – sometimes of observed things, sometimes things invented, but spawned by observation – that configure untidily and productively together. The drawing has an affiliation with Giambattista Nolli’s Plan of Rome (1748), but Giovanni Battista Piranesi’s 1762 Campus Martius (Field of Mars), featured in Collage City, comes closer to the spirit of the Texas Rangers’ experiment, where local symmetries and systems are based on taking real fragments to fantastic extremes with similar inventiveness in terms of resolving the interstitial pockets between the bigger urban set pieces. Hadrian’s Villa in Tivoli (built AD 120–138) is also a clear inspiration, particularly in the extension of the drawing at the edges into an imaginary landscape.

We would take a large blank sheet of drawing paper and begin to draw plans of buildings, historic and otherwise. Colin [Rowe] would say, I am going to draw the plan of the Villa Madama then Bernhard [Hoesli] would draw the plan of Wright’s Cage House, etc. all night long. In the early hours of the morning the paper would be filled with plans from all times, many hybrids too. At the end Colin would be devilishly delighted. In retrospect, who would have thought those plans of Classicism, Neo-Classicism, Modern, Constructivism, Contemporary would have been the genetic coding of the architectural monsters that followed?

—John Hejduk to Alexander Caragonne, May 1991

A fantasy combining archaeology, history, urbanism and architecture that Rowe adored and mined for so much writing and pedagogy.
The 1739 Turgot map of Paris, an imagined aerial view in oblique projection, linking urban assemblages and landscapes in unusual ways, has obvious affinity with Dot-the-Dot efforts. Patterns of rooftops and vegetation become textures against which roads, courtyards and gardens visually pop. The configuration of the Louvre, Tuileries Garden and Palais-Royal was another favourite of Rowe and Fred Koetter. More about competing logics within landscapes, the plates from Leonard Knyff and Johannes Kip’s 1707 Britannia Illustrata (Rowe must have been familiar with it) come remarkably close to the aspirations of the Dot-the-Dot drawing despite not being plans themselves. The perspectives of manor houses and estates of Great Britain emphasise relationships between formal gardens, agricultural fields and bodies of water. The manor houses frame the landscape by extending their centres and edges to garden walls, hedgerows, allées of trees and paths that zoom to the horizon. But the compositions of the Illustrata engravings are never cohesive, never perfect Beaux-Arts exercises, but in dynamic tension with the ragged woods, negotiating topography and irregular borders, and making the most of the happenstance situation of the buildings themselves as they configured over time.⁴

There was the unstated wish, no matter how often Dot-the-Dot was played, to achieve roughly the same sort of thing: a smallish, vaguely European town centre with implied civic programmes that appears as an assemblage of old and new types. This aim was fuelled by a shared passion for particular instances in the history of urbanism where new systems butt into old ones. The 1691 plan of the Friedrichstadt in Berlin is a fine example where organisational principles productively collide, the new town grid nuzzling into the perimeter of the centralised fortified core. Early 19th-century Turin is another case where three parts – castle, plan and governmental seat – interlock like cogs of a machine; the plan of the fortified town itself being an interlacing of grid, oblique paths and squares. Camillo Sitte’s studies of ‘urban rooms’ in his 1889 City Planning According to Artistic Principles are Dot-the-Dot forerunners in terms of scale as well as composition.

Leonard Knyff and Johannes Kip, Britannia Illustrata: Or Views of Several of the Queen’s Palaces, as Also of the Principal Seats of the Nobility and Gentry of Great Britain, Curiously Engraven on Eighty Copper Plates, 1708

Knyff and Kip emigrated from Amsterdam to London following the crowning of William and Mary in 1689. Their work is noteworthy for its high level of detail and accuracy in representing architecture and landscapes, as well as for diverse aerial vantage points, done before the advent of hot-air ballooning.

A Dot-the-Dot drawing has its own implied history. As it was handed off to the next person, the accumulated buildings and landscapes were treated as given site conditions. Adding something each time was like formulating an architectural response to an increasingly complex set of constraints. In this way it was a sped-up studio project, an opportunity for faculty to be students again. There was a marked difference to being the second versus the seventh contributor. Participation was voluntary, but there was peer pressure to take part at least once in an evening. Contributions varied depending on individual interest, level of focus and how tight the page’s negative space was getting. Non-architects, various hangers-on, were sometimes invited to ‘screw it up so the architects could get to fix it’.⁶ The parties included some drinking, as a rule, and this played no small role in loosening things up. Drawing under the influence was appropriate to the task of free association. Rowe started the collective drawing – akin to setting the first letters down on a Scrabble board – and ended the process, ‘devilishly delighted’, by receiving the completed work and playfully critiquing the results. It was a party game and serious architectural investigation at the same time. The drawings were conceptually valuable enough to remain pinned up until the next party as a trophy that could be interrogated for new ideas, but materially not precious enough to conserve beyond that. There are almost no surviving examples; they live in memory rather than archives. Dot-the-Dot represented the fusion of a group of people whose common purpose and approach to architectural education could best be expressed in a drawing.
Beyond questions of provenance, there is the procedure of the shared drawing itself. Invented by the Surrealists around 1920, the exquisite corpse is a collage technique adapted from a standard parlour game, Consequences. Typically, Consequences is text-based and played in the round with folded paper, with each player only able to see the last line of the previous player before adding their own writing. A variation, Picture Consequences, also involved folded paper and the drawing of a person in stages. The lines revealed at the fold helped the next contributor continue the profile of the figure. The Surrealists harnessed both types of Consequences games to generate poetry and artwork. André Breton was initially using this method as a diversion, for fun, but soon realised its artistic potential:

From then on no unfavourable prejudice (in fact, quite the contrary) was shown against childhood games, for which we were rediscovering the old enthusiasm, although considerably amplified. Thus, when later we came to give an account of what had sometimes seemed upsetting to us about our encounters in this domain, we had no difficulty in agreeing that the Exquisite Corpse method did not visibly differ from that of Consequences. Surely nothing was easier than to transpose this method to drawing, by using the same system of folding and concealing?

Shared authorship had as much to do with the fun associated with the method, as did childhood recollections of playing games. Despite the fact that architecture as a profession relies on teamwork and cooperation, drawing – sketching – remains mostly solitary. Dot-the-Dot was special in part because it was a uniquely social vehicle for architectural creativity, remaining true to its parlour-game and Surrealist roots: 'In fact, what excited us about these productions was the assurance that, for better or worse, they bore the mark of something which could not be created by one brain alone, and that they were endowed with a much greater leeway, which cannot be too highly valued by poetry.'

According to Jerry Wells, Dot-the-Dot was played frequently, both in Texas and upstate New York in Ithaca, usually at a party that could vary from a half dozen people to upwards of 40. It appealed to historians and designers as it invited quotation and invention. Initial 'moves' were in reference to historical examples or types. This reliance on precedent was a welcome relief from a studio culture predicated on novelty, and condensed the broader intellectual platform of the group.

Camillo Sitte, The Forum of Pompeii, from City Planning According to Artistic Principles, 1889

This study must have been in the minds of several contributing to the featured example from the Texas Rangers’s Dot-the-Dot drawings. In so many ways – from the jagged alignments, slight skews and aggregate order to the interplay of solids and voids, ink and paper – it served as a model for Rowe and company.
Indeed, it was the thing that came to ground so much of Rowe’s later teaching at Cornell. While never admitting it openly, the focus of his urban design studio – invariably plans of urban centres with all the trademark collisions and resolutions – was an intellectually tuned-up and extended version of Dot-the-Dot, the results of which were published in the *Cornell Journal of Architecture*.

Thirty years on in the same lecture room Rowe used, I gave an architectural analysis assignment that was really Dot-the-Dot played out over the length of a semester. Students were asked to incorporate pieces of buildings and gardens we looked at in class alongside their own. A sketchbook with a single folded sheet of paper about 3 metres (11 feet) long was required, as was black ink and the emphasis on plan. Despite these confines or, perhaps, because of them, the results were surprisingly varied and occasionally as intense as those of their forebears. Few students were open to trading off their sketches with each other as with the exquisite corpse; most preferred going it alone, the Rainer Jägals route. Some could not sketch by hand with any degree of happiness. A scandal developed when it was revealed that a few were composing their drawings first on a light table and tracing to the sketchbook. Another controversy erupted when some admitted to formulating their compositions on the computer, printing these and then tracing. I irritated at first, I became interested in the antipathy some students felt about just sketching. The feedback I got ran from ‘I’m just not comfortable putting raw pen to raw paper’ to ‘It is stressing me out to not have more control over the image. I am more comfortable on the computer, it’s where I feel more creative.’ Then there was ‘I hate making mistakes, there’s no way to erase with ink.’ Saying that rawness, losing control and cultivating mistakes was the point of the exercise did not help. But, eventually, they found ways to choreograph some chance – in terms of handling the plans of precedents on the computer – and factor in some whimsy of their own. This was the saving grace. The interstitial had to be invented and, even on the computer, there was some joy in designing plausible connections between given fragments, making stuff up within a set of serial confines, contingencies that were the real delight of Dot-the-Dot, its architectural jazz.

In his 1981 ‘Program versus Paradigm’ essay, Rowe supplemented his own diagrams with a series of drawings by Rainer Jägals, a student of OM Ungers, ‘who, about to die, felt obliged to draw’. These little axonometric fragments titled ‘City Dream-Fantasy or Vision’ merge characteristics of Campus Martius, Plan Turgot and Dot-the-Dot. Rowe put them towards the end of his essay as a finale, illustrating his argument against trends in urban planning: ‘a visual idea, properly recorded, will always transcend, if not polemic, at least practice. Because, in the end, I am compelled to suppose that it is drawings such as these – desperate, translucent, eclectic, elegant, and ironical – and not the programmatic compilations of the data collectors that are going to affect our vision of the city.’

This estimation of Jägals’s work reinforces the true value accorded to the Dot-the-Dot drawings. Jägals’s drawings appealed because they were one-man-shows that could have been extruded from the exquisite corpse game. Rowe adds this poignant touch: ‘He was only twenty-seven and he was dying; but almost following Michelangelo’s instructions to Tommaso dei Cavalieri – *Disegno, disegno e non perd’il tempo* [Drawing, drawing and I never miss the time] – he drew and drew and he used whatever time was available.’ Through the figure of this young man, he states how important drawing is to architects – it is what you would do to the end of your days – and, by this, we understand how important this party game really was. It was everything.

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Rainer Jägals, *City Dream-Fantasy or Vision*, 1967

left: One of several of Jägals’s sketches featured in the *Cornell Journal of Architecture* as well as in Rowe’s *As I Was Saying: Cornelliana.*
Exquisite Conurbation sketchbooks, Architectural Analysis II, Department of Architecture, Cornell University, Ithaca, New York, 2012

this page, opposite and p 25: Accordion sketchbooks kept over the course of a semester for the Exquisite Conurbation assignment. The analytical drawing and collage exercise recorded case studies. The students had control of their placement and juxtaposition in imagined landscapes and cityscapes. They determined their links, alignments and speculated on the new forms and organisations that this process of drawing might sponsor. Axes, edges, centres, arcs, bifurcations and slippages were sought and examined as the students evolved their continuous drawing on a single piece of folded paper.
Thirty years might have been too long an interval to revisit drawing this way given the impact of the computer in education. Regardless of media or techniques used to achieve the image, the fact that few got together to socially construct these things was another indication that times had changed. Older forms of social networking, as represented by Dot-the-Dot, were not of interest. What was social in the end was the mid-term sketchbook review where 50 outstretched sketchbooks were laid one after the other across the floor creating a striped carpet of plans where, here and there, some drawings happened to visually bleed into the ones laid above or below. Once this effect was noticed, we, as a group, took extra time looking for alignments and reading the long drawings together vertically rather than across individually. By adhering to some rules, but going it more or less alone in terms of formulating the compositions, we had inadvertently generated a larger than intended exquisite corpse. There were enough aligned edge conditions – acting as the folded page of Consequences – to generate one enormous latter-day Dot-the-Dot. After the anxiety associated with the assignment itself, completing the sketchbooks became less onerous – some even admitted to having fun with it or getting into the process. Even so, the day they were due several admitted to pulling an all-nighter, but no one complained about this final sprint to the finish line. The results showed some daring since the review, particularly from those who had complained about the unusual premise – asking architecture students to draw.

The interstitial had to be invented and, even on the computer, there was some joy in designing plausible connections between given fragments, making stuff up within a set of serial confines, contingencies that were the real delight of Dot-the-Dot, its architectural jazz.

Notes
3. Leonard Knyff and Jan Kip, Britannia Illustrata: or Views of Several of the Queen’s Palaces, as also of the Principal Seats of the Nobility and Gentry of Great Britain, David Mortier (London), 1707; reprinted privately for the members of the National Trust as John Harris and Gervase Jackson-Stops (eds), Britannia Illustrata, Knyff & Kip, Paradigm Press (Bungay, Suffolk), 1984.
4. I am indebted to Doug Graf’s generous advice regarding possible precedents for the Dot-the-Dot drawings and his feedback on this essay as a whole.
6. Personal interview with Jerry Wells, 1 June 2012. It is Wells’s recollection that the game was called Dot-the-Dot, but the nomenclature of the drawing type is difficult to verify. Most simply encountered it as ‘the drawing’ done at the Texas Rangers faculty meetings/parties. Dot-to-Dot (another name for Connect the Dots) would also make sense given the nature of that game; the whole picture not becoming clear until all connections are made. Hoesli incorporated a Bauhaus/Froebelian drawing technique, dot drawing, into foundation assignments. Dot drawing – stygmographie – is a method of transposing a drawing from one surface to another using a gridded field of dots as guides.
8. Ibid.
11. Ibid, p 35.