CEU (Centros Educacionair Unificados): Translating socio-democratic values through the formation of community integrated educational spaces

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The CEUs, or Unified Education Centres (Centros de Educacao Unificados) are public facilities conceived as local centres of urban life, located in the peripheral and disenfranchised areas of São Paulo, Brazil. The facilities are intended for education, culture and sport and are for both school students and the surrounding community. The centres were developed by the Municipal Buildings Department (EDIF), and designed by the architects Alexandre Delijaicov (the main author), Andre Takuya and Wanderley Ariza. The CEUs were the major cornerstone in mayor Marta Suplicy’s election campaign and it was through her initiative and direction that the CEUs came to fruition.

In 2000 Marta Suplicy of the leftist Workers Party became the mayor of São Paulo. She had run her campaign and committed her government to addressing especially the excluded sectors of disenfranchised areas of the city: the urban poor living mainly in the peripheral districts. Her aim was to translate the values of a social-democratic society, despite the continuing neoliberal trends in the country, through the formation of community integrated spaces by using education as the catalyst (Wilheim, 2004).

Marta Suplicy coordinated a team of architects, led by Alexandre Delijaicov, to develop new educational centres based on the “Park School” themes outlined by educational
The Unified Education Centres (CEUs) are one of the most topical and exciting public policy reforms to combat inequality. Currently, they form a network of 45 units deployed in the poorest and most disenfranchised areas at the periphery of São Paulo. To keep costs down all CEUs are constructed out of prefabricated elements and standardised forms. Prefabrication has a bad reputation in Brazil as often being of bad quality and thus concerns that this modularisation would not be embraced by the local communities was resolved by creating a system of rules that would ensure specificity and individualisation of the CEUs.

The locations of the educational centres were informed by a series of social exclusion maps developed by Aldaíza Sposati in 2000. As a result, the CEUs are located in underserved communities of high social exclusion, normally in previously regarded informal or illegal areas that are now being regularized and urbanised. The parcels that these schools are built on are usually protected green spaces where only public buildings can be constructed meaning that the CEUs are often built in natural settings amongst trees and small rivers. During the week the CEUs function as schools, while the evenings and weekends the spaces are transformed into public spaces. Many of the CEUs have been completed and are in full use; independent evaluators have reported that community satisfaction with the facilities exceeds 90 per cent (UNHabitat, 2010).

How do the CEUs facilitate interactions between the local community? How are the CEUs conditioned by spatial characteristics, operating standards or other political interventions? This paper aims to show how these aspects affect the everyday interactions not only within the Unified Educational Centres but also for the wider community.

SOCIO-POLITICAL BACKDROP
I. Teixeria’s Legacy: Historical Context

The early 1900s saw Brazil develop into the major economic centre of Latin America and as a result there was a great domestic migrational shift to cities. Directly connected to the industrial capitalism in the country, the progressive urbanisation of Brazil means that new urban renewal works had to be defined and new local administrative models were adopted. This paved the way for new ideas in regards to society, education and politics to be developed (Gaffney, 2010). To deal with this changing demographic, a manifesto of new education was developed by intellectuals keen to pioneer a new educational reform through public policy. These “pioneers”, led by Anísio Teixeira, the godfather of education in Brazil, advocated for the universalisation of public school using modern architectural principles. Pioneers of the modernist movement held the belief that in creating better
architecture (open spaces, access to light, nature and air), a better world would be achieved (Henket, 2002). This new educational system appropriated the modernist architectural style with the ambition that these social ideals would be transferred to the new generation. The basis of Teixeira’s educational views was that “a democratic education prefigures a democratic society” (Cury, 2000). Social inequality and secularisation were the two main themes that defined the career of Teixera; through education the development of individuals would construct a foundation by which to support equality and lead to the democratisation of Brazilian society. To realise this ambition, educational institutions had to support participation and dialogue within its own rights. In this vein, Anísio Teixeira developed the Park School in 1947 as a model by which to unite communities and schools. To begin with, the first schools served the migrating poor from rural areas into the city in the 1950s. It was important that the schools would act as the community interaction point, where the educational institutions would form the backbone of Brazilian society.

The Park School would supplement the “class-schools”. The programme was organised by distributing school times and locations: for every four “class-schools” there would be one corresponding “park-school”, where pupils would spend half of their time. Pupils, now split into smaller groups would engage in various activities ranging from physical education, social activities, arts and creative pursuits and activities organised around the library (Noblit & William, 2008). These different activities were delineated through different building typologies and consisted of a series of structures, some of which were distributed within the adjacent community and others within the park.

It is important to note that from the beginning Teixeira gave importance to architecture as the “protagonist of the democratization of education” (Correia de Lira, 2015). The Park School promoted the idea that modern architecture would be the medium in rethinking education and the role of pedagogical philosophy. The teaching programmes would be spatialised through a dialogue of architectonic and pedagogic operations, responsible not only for the organisation of the educational spheres but also for the physical and social spaces of the school. By using the simplicity and clarity of form, the educational programmes would be differentiated through separated elements. Through the development of the Park School model, Teixeira was able to express his thematic ambitions of educational centres as being the catalysts of a new “cultural renovation” (Dantas, 2003). Using industrially and mass produced materials, the school would be designed and built using a 1.25 meter basic module to maximise the convenience of standardisation (Teixeira, 1950) and ensure cost efficiency. This is crucial to the understanding how truly nuanced the complex relationship between social policies, education and architecture were for the vision of furthering the economic, social and political development of Brazilian society. Unfortunately, because of its socialist political ideals the actualisation of the Park Schools ended once the military junta came into power.

The military dictatorship that reigned from 1964 - 1984 “repressed workers organisations, purged public administrations and criminalised leftist political parties” (Skidmore, 1988). What should be clarified is that the junta did not disregard education but rather orchestrated a paradigmatic shift away from holistic-emancipatory concepts of education towards the paradigm of skilled labor for a growing economy. The struggles for public schools as outlined by the Plano Nacional de Educação de 1962 and drafted by Anísio Teixeira as a result began to face serious challenges. Two years later Teixeira was compulsorily retired from public service and subjected to investigation by the military, though nothing was proven against him. In short, this was the death of the Park School.

This same period saw an improvement known as the “economic miracle”, where privatisation, access to loans from the IMF and the United States, deregulation and access into the international market saw huge economic growth. However, this laissez-faire economic liberalism led to mass unemployment, income inequality, reduction in working class wages and it was Brazil’s working class majority who suffered the most (Skidmore, 2010). It wasn’t until the beginning of the twenty first Century that public education once more became a central theme in São Paulo’s political agenda.

II. From Teixeria’s Park School to Delijaicov’s CEUs

Between 1950 and 1963 just four units of the Park Schools (Escola Parque) were built.
Despite the modest number of units realised, the Park School is recognised by UNESCO as a progressive educational model and considered a pioneering movement in revolutionising education. It consequently has had significant influence on the architectural designs of various prominent education centres developed thereafter, from the 500 realised CIEP buildings conceived by Darcy Ribeiro and designed by Oscar Niemeyer in the 1980’s to the 45 CEU’s orchestrated by Delijaicov in the early noughties, to name just two.

In 1957 Anísio Teixeira laid out the education plan for Brasilia using the Park School model by which Lucio Costa’s Superquadra neighbourhood plan was based around (Roach, 2011) (fig. 1). This is perhaps the most prominent example where the school is the central organising element of urbanism (Roach, 2011). The Park School embodied a new approach of pedagogical philosophy that, in addition to the basic curriculum, aimed to improve the social condition by cultivating a sense of “responsibility, practical action and creativity” for its students (Salviani, 2007). In this sense the school is not exclusively a typology with the sole function of subject-based pedagogies but rather frames the larger ideal of what was envisioned as an enlightened society. The school typology thus forms the cornerstone of attaining this utopian vision of the ideal state.

The architecture of education in Brazil should not be regarded as self-contained artifacts but rather as expressions of a larger societal system, which consistently tries to redefine the relationship between society and the environment they interact with. This utopian vision embodied in architectural form can thus be understood by how they configure the built environment to respond to social divisions and further propose alternative models for how to develop as a society. These were the ideals of educating for life and democracy which served as inspiration and strongly influenced Delijaicov when drawing up the theoretical blueprint of the CEUs.

A MODEL FOR THE 21ST CENTURY

I. Delijaicov’s Interpretation: the river, the bridge and the tower

The basis of the Centros de Educacao Unificados (CEUs) was founded on the social challenges facing especially the disenfranchised at the beginning of the 21st Century. Financed and realised through the newly appointed socialist leaning government headed by Marta Suplicy, Alexandre Delijaicov’s challenge was how to transform the ideological concepts outlined by Teixeira and translate them into an architecture appropriate to address the contemporary challenges then facing São Paulo.

Alexandre Delijaicov brought his ideas of the “channel-city” in alignment with how the new CEU structure would be interpreted. This consisted of three main elements: the channel, the bridge, and the tower. These elements can be understood both physically and metaphorically. At an urban level, the channel - bridge - tower constellation could be discerned as three dimensional coordinate system: the channel as the horizontal element, the bridge transversing the channel extending along the other direction of the longitudinal axis, with the tower being the vertical element (fig. 2) (Anelli, 2003). This line follows the logic of appropriating the local geomorphological qualities of the sites into the CEU programme. The three themes of...
Delijaicov’s “channel-city” are however far more prevalent when perceived as the theoretical basis behind the CEUs.

To differentiate the CEU centres from their surrounding, the plots are always delineated by means of separation or topography, translated either through infrastructure, landscape or other physical interventions. In this vein, the channel represents the boundary of the site. Contrary to how discourse on public space and accessibility is understood contemporaneously in Europe (connectivity and openness are key), the CEUs celebrate their positions as the formal public space especially through its intentionality of being elevated on a podium (fig. 4). In this sense the bridge is a metaphor of how to bring urban life to a specified space, functioning as the urban catalyst. From Monday through Friday, CEUs are model schools. On the weekends and evenings they transform into a community hub for the districts where they are located. Families attend movies, shows and educational or creativity workshops, for example. Everything is free of charge. This flexibility of space and variety of programme functions as the bridge to transform a set of buildings into a backdrop for urban life. The tower can be translated as the organisation of programme. There are two modes of resolving the programme arrangement: the first strategy allows for a more organic composition creating variation in spatial qualities, both vertically and through the interstices of volume, whereas a second strategy places buildings oriented such that a central plaza is created (fig. 5). These three strategies are the mechanisms by which the CEUs attain their high standard quality as public facilities while simultaneously absorbing local conditions to ensure their inception are highly specific.

II. Forms and Functions : creating space through composition

The CEU programmes (didactic, day care, recreational) are assigned to three volumetric sets of clear and strong forms: a long and low rectangle, a disk and a block (fig. 6). The largest form, the didactic volume, is based on an orthogonal grid and combines the classrooms, cafeterias, library, tele-com centres and exhibition spaces. The most architecturally stunning and prominent of the forms, the elevated disk, is the day care. The final volume, the recreational block, is a five floor volume housing the theatre, sports centre and music hall. Changes in composition between the three volumes can meet the different contexts of implantation of the CEUs. The perpendicular arrangement of the columns creates a space resembling a square. The orthogonal didactic building partakes several dimensional variations by program and topography. The strong tectonic aspect of the CEU is the abstraction of geometric form; the main volumes assume a formal purity that accentuate circulation and frame spaces tailored to the human-scale, while maintaining a sense of urbanity. The buildings are arranged within an orthogonal system, with all buildings sitting adjacent or perpendicular to one another. This layout ensures a clear distribution of functions while the linearity allows for a clear framing of the newly articulated urban plaza.

The three distinct volumes and their corresponding pre-cast systems (fig. 7) allows for the flexibility of arrangement and form specifically composed for each site. The implementation of programme was adapted to address suitability and needs for the intended area, meaning each CEU is distinctive and responsive to the neighbourhood is facilitates. Impressively, this

fig. 7: Structural build-up of the didactic volume. The entire structure is made up of just 11 elements composed of 4 types of column, horizontal bracing girters along the facade, 3 types of beam, floor plates, roof elements and fencing. The structure can be assembled in 1-2 days, with the in-situ internal volumes requiring around 1 week. Image source: Author

fig. 8: Floor plans of a typical school building.
clarity in construction operations allowed for 21 CEUs to be built in the first year, with 24 more built the following year. There is a clear architectonic language that connects all the CEUs, despite them being constructed by over twenty different architects.

III. From the generic to the specific

Despite the CEUs being variations of the same volumes and elements, the strength of the project is its variation and adaptability to context (fig. 9). In order to assure cost effectiveness, the architects developed a modular system where the elements could be pre-fabricated and mass produced. It was however important to create a distinctive character for each of the CEUs. This was done in three ways: flexibility of building volume based on suitability of local needs, variation in composition, and interweaving the surrounding topography when possible (fig. 10). Each project tried to identify and transform the district by establishing a direct dialogue with its territorial characteristics. Territory and the surrounding urban context has played a central role in the development of the CEUs, with each unit reshaping the landscape around them and absorbing natural elements around them when possible. These natural features are protected by environmental legislation in Brazil and are the only spaces left available for building social facilities. Thus all the CEUs are built on the unused hinterland of Sao Paulo’s forgotten corners. Rivers, sloping terrain and ponds were appropriated where possible, defining the layout of the rest of the scheme, while addressing the degradation of hydrological resources prevalent in São Paulo today. By accentuating the given topographical qualities...
the CEUs produce a new synthesis between the social dynamics of the community and the physical environment they occupy. This is very much a calculated design intention with aims of strengthening a local character for the community to identify with and embrace.

**IV. CEUs as a springboard for social inclusion**

As micro-centres the CEUs successfully serve under-served communities of high social exclusion. The CEUs not only offer a platform for the local community to come to gather and interact, but facilities such as IT Centres, tele-communication portals and meeting rooms necessary for individuals to develop and communicate in the digital era. Thus the CEUs offer not only a physical space for people to gather along the piazza or swimming pools (both of which behold vibrant urban vitality), but also work as a bridge by which communities on the underprivileged periphery of the city have a means to narrow the societal gap and widen their prospects. Returning to the original vision laid out by Teixeira, and arguably successfully implemented through the architectonic translation laid out by Delijaicov, the CEUs may very well be the mechanism by which the democratisation of education, for pupils as well as adults, steers towards a more egalitarian society of the future.

**CONCLUSION**

The city of São Paulo has shown that educational projects can develop qualitatively if they promote the fight against social inequalities and further contribute to the development of community values of participation, inclusion and autonomy. The architectural vision of the CEU project has provided spaces of citizenship, and afforded possibilities to diminish social stratifications through training, education and means of communication. Embodied through modernist architectural principles, the CEUs have successfully promoted the universalisation of public schools whilst transforming the public spaces around them. The spatial arrangement has proven of key importance, with the clear definition of programme determining community interaction points and spaces for the public through the juxtaposition of forms. Much of their success is a result of transforming generic elements with the specific fabric they sit in, taking advantage of local characteristics as well as responding to the specific needs of the area. The schools function more as a catalyst for community interaction within a given community and has so far proven successful. The CEUs can thus be perceived as a successful strategy for strengthening community involvement and providing opportunities needed especially in underserved communities through spatial and programmatic measures.

That being said, some of the main intentions integral to the paradigm behind the CEU projects come short. The CEUs were intended to be vessels by which the underserved could span social and economic divisions. A significant objective for the CEUs as outlined by Delijaicov was for the centres to function as social bridges. Despite performing successfully as community interaction and education points, the CEUs operate more like islands. By placing CEUs as the catalyst to address issues of social exclusivity, while actually functioning as islands that serve solely their local communities, suggests in this scheme that the bigger social issues could be resolved simply through measures of socialisation and education. Although education in itself is giving people the foundations to interact with society on more even terms, it is only when education actually promotes social interactions between social strata (ie. between different parts of a city) when it is truly inclusive. The CEUs function as autonomous entities with no overlap with surrounding neighbourhoods. This could be resolved by the strategic placement of CEUs on the borders of contrasting demographics (fig. 11). What this project is currently lacking is how schools interact not only between neighbourhoods but also with other parts of the city. Whereas the Park school structure had this built-in by bringing pupils from different class-schools together, the CEUs facilitate spaces solely for the neighbourhood they were built for. It would be interesting to see what happens when a CEU is put on the border between two neighborhoods. By reframing CEUs as overarching elements actually catering to different neighbourhoods we can then repostulate what this didactic architecture would look like to encourage meaningful interchange between communities.

![fig. 11: The existing locations of CEUs are currently all in the peripheral and low income areas of São Paulo (left). Future implementation of CEUs (red dots) should be placed strategically on bordering neighbourhoods to encourage more social overlap. The two main rivers of São Paulo (Pinheiros and Tiete) divide the city into the affluent (central areas) and poor (north and west of the river). To deal with this physical boundary, new focused CEU connection hubs could be placed along the river and function also as bridges connecting both sides and facilitating more dialogue between different stratas of the city and encouraging more interaction with the surrounding neighbourhoods (right). Image source: Author](image-url)
A second challenge facing such extensive public programmes like the unveiling of school districts like CIEP and CEUs is the inevitable affiliation with the incumbent political party. Education reform in Brazil has been a component for modernisation and progress for new governments taking power. However, in this logic the proponents of the new educational wave could also be accused of framing education in an overly partian understanding of politics risking a rollback with a new government. This was the case for the Park School, the CIEP programmes, with the CEUs having faced similar challenges. After Marta Suplicy’s mayorship ended, the new government attempted to disband and discontinue the CEU programmes. It was only after significant public outcry that the CEUs continued to have government support. In this vein, for implementations of similar educational investments in another society, it could be a smart thing to stay more distant to party politics. In thinking about further implementations of CEUs in either other cities or more extensively within São Paulo, the greatest challenge is how to facilitate interchange between communities through the fine tuning of these vulnerabilities. Rather than diminish the success of the CEUs, these criticisms instead illustrate new directions future developments of CEUs could transition towards.


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