The Legacy of Office Landscaping: SANAA's Rolex Learning Centre

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ABSTRACT

In this text I relate the Rolex Learning Centre *(RLC) at EPFL in Lausanne by Japanese architects SANAA to the historic example of the* Bürolandschaft *[office landscape] invented by German management consultants Eberhard and Wolfgang Schnelle in the late 1950s. In doing so I posit the RLC as the most advanced and most elaborate contemporary example of a workplace architecture that mirrors the post-Fordist knowledge economy.*

The text introduces the world's first Bürolandschaft Buch und Ton *for the Bertelsmann corporation: the design's political aspirations and the economic context in Post-War Germany, its cybernetic design method, as well as strategic design decisions. I then discuss the interior economy of EPFL's new architectural icon and how its interior economy differs from the political and organisational aspiration of its post-war Europe inventors.*

When it opened in 2010, Japanese architects Kazuyo Sejima and Ryue Nishizawa's *Rolex Learning Centre* (RLC) for the Ecole Polytechnique Fédérale (EPFL) in Lausanne, Switzerland met with worldwide critical acclaim. The flat, horizontal building is situated at the edge of the EPFL's campus. It contains various facilities for an international crowd of researchers, students and the faculty of the technical university founded in 1853. A library and an auditorium are housed within the one-storey building; most of the space of the rectangular container, however, is an open, continuous and informal workspace for students, researchers and faculty members (Figure 1). A café and a restaurant are included. The hilly interior, with its floor and ceiling sloping up and down, creates various different situations for knowledge production, learning and discussion in groups and teams within the minimalist space. The library contains a series of office cubicles which allow for intimate and formalised working and learning, both for single researchers and for small teams of up to 8-10 researchers. The RLC has been labelled a 'micro-scale landscape'[2] by its architects; others have variously described the 166 metres long and 121.5 metres deep interior as a landscape[3] that 'with sobriety and subtlety, transcend[s] the need for functionality in order to touch the mind and should – binding a community together with the art of living collectively,'[4] as Patrick Aebischer, president of EPFL envisions.

Above
Figure 1: SANAA: Rolex Learning Centre, Interior view of a part of the 'micro scale landscape' for learning. Photo: SANAA - image supplied by Andreas Rumpfhuber

It seems that the *Rolex Learning Centre* is an architectonic icon that has given a new identity to the university. Twenty-first century, contemporary, modern, achieving the impossible: these appear to be the keywords attached to the architecture when reading the promotional literature published by the EPFL. It is certainly a masterpiece of structural engineering, acoustics and building logistics. The horizontal architecture needs to be heralded as the true contemporary spatial typology for learning and education. Reading interviews with the architects or architectural criticism in newspapers and magazines about the RLC, one gets the impression that it is an overwhelming experience wandering through the building's topography and its different atmospheric zones.[5] Yet a reading of this space in relation to a contemporary Post-Fordist knowledge economy with its imperative of life-long learning, continuous communication and dynamic sampling of all working subjects involved is missing.

By relating the *Rolex Learning Centre* to the World's first *Bürolandschaft* [office landscape] I discuss the EPFL's new architectural icon in relation to (1) how the architecture of RLC and *Bürolandschaft* spatially optimises and refines knowledge production by providing informal space and, (2) how RLC's interior economy and thus its organisation differs from the political and organisational aspiration of its typologic predecessor despite its visual similarity.

The office landscape was an invention of the German management consultants Eberhard and Wolfgang Schnelle and their team in the late 1950s and became the spatial blueprint for a new, non-hierarchic knowledge economy after the Second World War. Yet, contrary to its contemporary counterpart in Lausanne, its design was based in a European post-war economy determined by the theory of John Maynard Keynes, the rise of the welfare state, and its utopia of the end of labour. By relating the *Rolex Learning Centre* to the administrative office spaces of the early 1960s, I conceive of the RLC as the most advanced and most elaborate contemporary example of an architecture of *immaterial labour* – an architecture that mirrors post-Fordist labour conditions; in which labour has become diffuse and penetrates all aspects of life; in which work-time and spare-time have merged, and the job has become indistinguishable from education and vocational training (Figure 2).

THE ECONOMY OF IMMATERIAL LABOUR AS INSTRUMENT OF SUBJECTIFICATION

The concept of immaterial labour was originally used by the Italian Autonomia movement and its protagonists - Mario Tront, Antioni Negri, Maurizio Lazzarato and Sergio Bologna, amongst others - to describe post-Fordist changes in the production process in the late 1950s and early 1960s.[6] For the activists and philosophers of the cultural, post-Marxist left-wing Autonomia movement[7] immaterial labour comprised of alterations in the work processes of big corporations of the manufacturing and service industry. Since the Second World War, workers in these branches increasingly needed qualifications, which implied that they were required to use and operate

automats, digital machines and computers. On the other hand, the concept of immaterial labour entailed artistic, creative and domestic work processes, such as painting, chatting with colleagues, and running the household, that until recently, had been understood to be privileges of the bourgeoisie and not registered as work at all. Since the Second World War this extended concept of labour and the accompanying rise of the knowledge economy (an economy based on the production of knowledge), has become particularly dominant in Western industrial nations, leading to a specific division and restructuring of labour processes. These restructuring processes were triggered by the introduction of new digital technology into a formerly analogue work process of administration, and accompanied by the highly popular utopia of the 'leisure society'.

In any case, architecture of labour in general efficiently arranges humans and machines in an exclusive interior. The exclusiveness of the production spaces is thereby conceived in a multitude of modalities, establishing different kinds of interior economies. However, every production space – whether self-governed by a collective or directed by a capitalist - is always regulated by rules of conduct and codes. Exemplary models for modern labour spaces are the Royal Salt Works of Chaux (1771-1779) by Claude-Nicolas Ledoux, the social-utopian workers project, New Harmony, (1825-1827) by Robert Owen and his architect Stedman Whitwell, but also Boodle's (1762) or the Athenæum Club (1824) in London. They constitute ideal types of the modern production space, of which *Bürolandschaft* and SANAA's *Rolex Learning Centre* are post-war predecessors mirroring

Opposite

Figure 2.: Eberhard and Wolfgang Schnell: Office landscape Buch und Ton *(1959-1961).*
Interior view of the accounting division of the Bürolandschaft.
Source: Archive Quickborner Team.

an emerging economy that is emphasising knowledge as equally important to material and other resources within the production process. All exemplify modes of an architecture of labour: they enclose an assembly of men and women together with their machines and compose an ordered and controlled interior, albeit with different orders and different modes of governance ruling the various productions of these spaces. This applies both to the governor representing the French king in the middle of the compound, ordering and disciplining the *Physiocratic* economy[8] of the Salt Works and to the informal organisation of the early bourgeoisie production space of the exclusive London clubs, in which chatting with one another was considered to be productive in itself.

In general, spaces of production question the power-structures of the subjects, be they the labourers, the architects, the entrepreneurs, the students, the scholars or, nowadays, the researchers. They are all enmeshed within manifold processes of rationalisation, discipline and subjectification.[9] They become 'produced', unable to step outside or flee but rather required to actively engage with a given situation and context in order to alter the situation in any way. This is relevant for understanding and speaking about architecture, being as it is not the autonomous formal composition of a single architect or a team, but a reflection of a wide-ranging, complex discourse of society including its economic framing and ideological vanishing point.

BÜROLANDSCHAFT BUCH UND TON AND ITS POLITICAL ASPIRATIONS

Viewed today as the first ever built office landscape[10], *Buch and Ton's* economic and ideological framing can be summarized as: (1) an economic and fiscal policy based on Keynesian theory and the effect on national economies of the Bretton Woods treaty of 1942, which allowed for the emergence of the European welfare state and a general acceptance of social liberalism in post-war years in Germany, and (2) the new thought model of cybernetics that facilitated a far reaching re-structuring of European society by promising full automation through strict rationalisation of all labour processes and the coming of the leisure society. It was within this context that the *Buch und Ton Bürolandschaft* was conceived and designed in 1959 by a trans-disciplinary team of German computer and information scientists, mathematicians and philosophers close to the management consultants Eberhard and Wolfgang Schnelle.

Buch und Ton originated as an experimental space for the mail-order company of Bertelsmann in the German provincial town of Gütersloh. The space was only planned to be in place for a short time. Ultimately, it was in use for about ten years, constantly changing and adapting itself to new situations in the market, creating the prototype of a post-Fordist workspace with a flat hierarchy aspiring to a democratic workspace, promising a society on equal terms, a pluralistic community and a self-organising form of governance (Figure 3).[11]

Ultimately, the idea was to create a space that would enhance the mail-order business of Bertelsmann, an organisation that already operated along cybernetic principles. Its logistic function was specifically to complement and optimise the *Bertelsmann Lesering* [book club] in order to achieve maximum efficiency in storage capacity and to re-structure the mail order business towards the direct marketing of books and records. Contrary to the rigid business models of book clubs at that time, the *Bertelsmann Lesering* would introduce its own, highly flexible model. The Bertelsmann mail-order system was organised in periodic rhythms offering a free choice of books to its members, including an elaborate system of bonus rates. In so doing, Bertelsmann had already outsourced most of the book production to other companies. By specialising in directly distributing books and records, it would aim to minimise its inventory of books by only selling what was demanded through the order sheets. Thus, through direct distribution, Bertelsmann would aim at targeting the typical German reader without running the risk of failing to sell a book it had in stock. Considered along these lines, the experimental office space of *Buch und Ton* needs to be understood as the relay in which all the information of all the readers of the Berteslmann book club would come together and thenceforth be processed efficiently. The aim of the space was to improve communication.

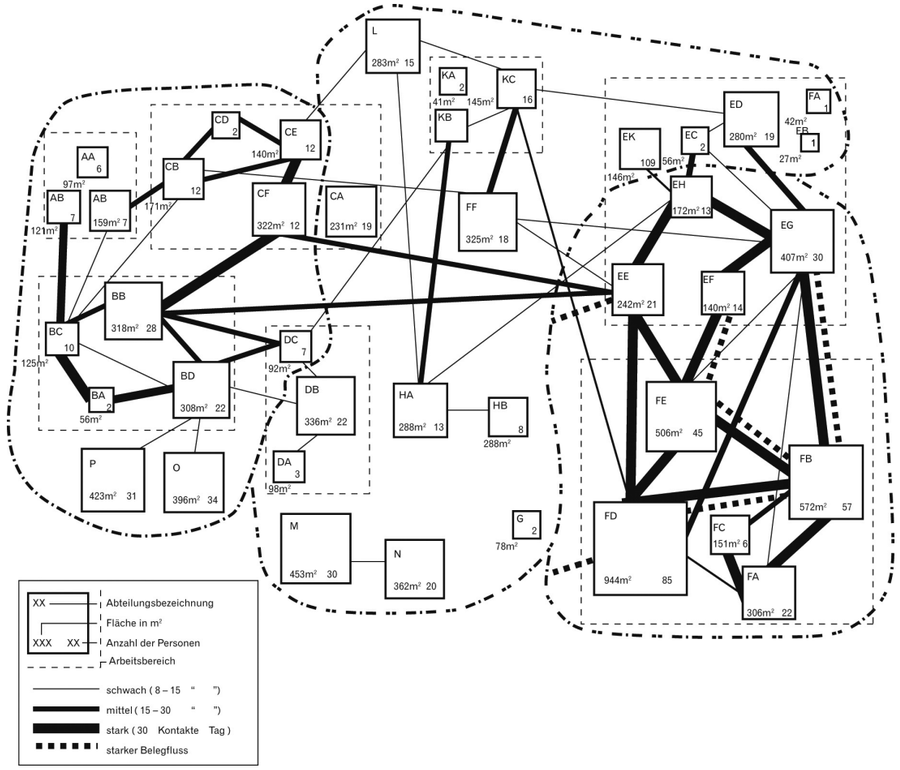
Buch und Ton was housed in the converted top floor of an existing warehouse for books and records on the company site and was roughly half the size of a football pitch (a fourth of the *Rolex Learning Centre*'s cross floor area). The average acoustic level was between 49 and 53 Phon (which is comparable to the noise exposure of a 1960 VW Beetle at a speed of 50km/h), the floor covering was a nylon carpet and the ceiling was fitted with suspended aluminium acoustic panels which were squarish and coloured. Lighting was provided by fluorescent tubes glowing in 'White de Luxe'. Each of the panels' illumination levels was separately controlled. The air-conditioning contained a low-pressure air changing system that could be used up to six times, serving not only as heating and humidifier, but used also for de-dusting, sterilising and odour-neutralising the vast space (Figure 4).

The constantly adapting interior economy of *Buch und Ton* was implemented with the help of a cybernetic design method called *Organisationskybernetik* [cybernetics of organisation]. In addition, an ethnographically inspired assessment method aimed to improve the information flow within the organisation by involving all co-workers and management, deciding on a strictly rational figuration of the workspace, and formalising and rationalising work procedures. Finally, the design of *Buch und Ton* followed the logic of a working community with a flat hierarchy of small, manageable groups and teams with no supervisor or group leader, or, alternatively, with the manager positioned as part of the group amongst his team members. This established a new form of governance within the *Bürolandschaft*: one based on the principle of control as opposed to supervision (as in the Taylorist factory). It had no formal affinity with the strict, geometric layout of workspaces associated with American open-plan offices, such as that in Billy Wilder's 1960 film, *The Apartment*. The cybernetic principle of feedback loops within each of the small teams but also between each of the teams of *Buch und Ton* constituted a rationalised, formalised communication network that in itself guaranteed control.

As the inventors of the design method of *Bürolandschaft*, the management consultants Eberhard and Wolfgang Schnelle have repeatedly stated, the explicit aspiration when designing and organising *Buch und Ton* was to ultimately free all workers from work through full automation and to dismiss them into the everlasting spare time of the social-liberal state.[12] The ambition of the designers and their trans-disciplinary team of mathematicians, computer scientists and cyberneticians was dual: (1) to create an office space as a flexible and adaptable instrument for corporations by conceptualising space that is easy to arrange to new formations of work processes, and (2) to design a workplace as an all-embracing environment for living: an environment that, due to an anticipated automation of administrative work, would dismiss people into an everlasting leisure time.[13]

Bürolandschaft would organise the labourer in a democratic and non-hierarchic way within the space. Individuals would relate to one another through rationalised and formalised work processes; an emancipated working collective would be created in which all

Opposite
Figure 3: Eberhard and Wolfgang Schnell: Office landscape Buch und Ton *(1959-1961). Test set-up in the space in order to test the visual effect of the layout. Source: Archive Quickborner Team*

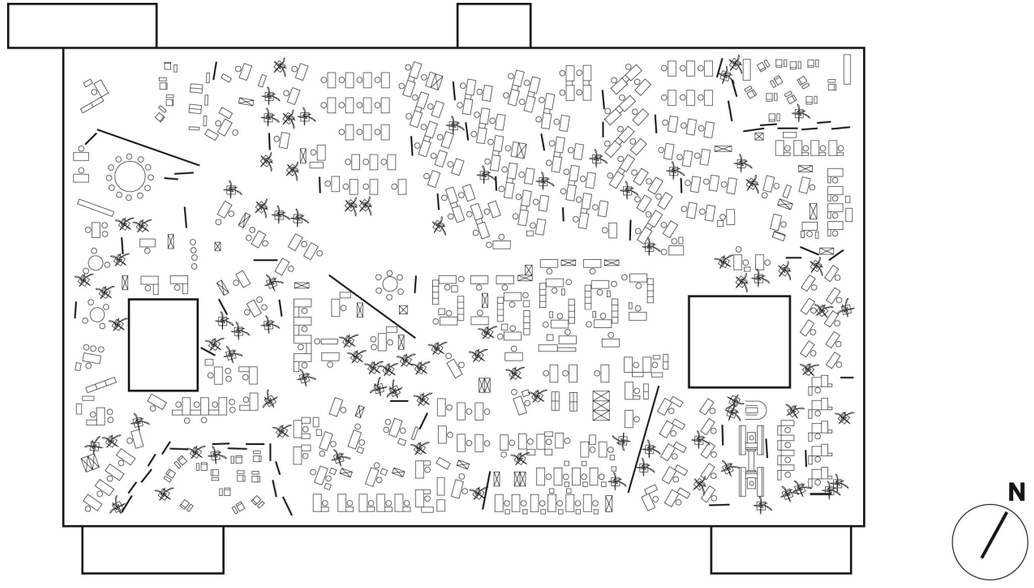


were on the same hierarchic level, and each labourer's knowledge would have the same value. This would free the workers' society on a concrete level from reactionary and needless status symbols, and on a conceptual level from old and outdated forms of governance and despotism. Thus the design of office landscapes pursued a universal space emptied of all symbols and identities, able to be programmed and used in any way. It aimed, one can argue, to establish a space without identity: an utterly neutral and universal container functioning as infrastructure and allowing the user to actively adapt the architecture and its interior organisation to any use. In some ways, this is similar to the concept of *polyvalency* developed by the Dutch architect Herman Hertzberger a few years later. Hertzberger delineated a flexible, somehow emancipated spatial structure constantly adapting itself to new uses, new problems and new programs. His concept of polyvalency begins

with the assumption that a perfect solution never exists. Since a problem that requires a solution is ever-changing and can only be temporary, Hertzberger opted for a universal form: a form that exists through the absence of identity and distinct attributes.[14]

LANDSCAPE OF THE IRREGULAR RHYTHMS

The claimed universality of the *Bürolandschaft* space thus allowed the layout to continually adapt to the constantly evolving new work processes and economic settings. Works groups could be easily re-arranged or dissolved in order to meet new organisational goals or technological advances. But it was also the cybernetically calculated arrangement of flexible workspaces and their designed relations and non-relations to one another - the rationalised placement of potted plants and screens and even the calculated colour choice of the ceiling - that allowed the stark, endless and generic interior of the last floor of the warehouse in the German province to become subjectively and visually chaotic and therefore impossible to survey in an old-fashioned, hierarchic way. It was exactly this seemingly chaotic layout that made the space liveable. Thus it complied with the designers' claim to provide an intimate and 'human' architecture despite the vast, extreme and ever-evolving dynamic of the rationalised space (Figure 5).



Opposite
Figure 4: Diagram of information flow within an existing administration of about 800 co-workers. Re-drawn by the author. © Archive Andreas Rumpfhuber

Above
Figure 5: Layout of the first formation of Buch und Ton, *1961*
Re-drawn by the author. © Archive Andreas Rumpfhuber

Generally speaking, the design method *Organisationskybernetik* results in: (1) an enclosed space of the organisation being marked: an abstract, horizontal plane, preferably extensive and, within its compounds, accessible and barrier-free, (2) an interior that is regulated by artificial climate, acoustic and lighting design, and (3) moveable elements such as tables, chairs, room dividers and plants but also personnel and automata ordered in various constellations on the plane. In practice, a precise catalogue of requirements is being defined, and the arrangement and configuration of the interior space is being controlled through the interrelations between its elements. The furniture is arranged according to the workgroups and assigned teams. Entrance and circulation routes are marked by plants and never invade a working unit. Even sightlines are calculated in order that each co-worker within the space is only able to survey a certain part of it. Furthermore, the average noise-level in the space prevents people from listening into other people's phone calls or conversations.[15]

Crucially, what is being aimed at here is a loose arrangement with manageable 'subjective spaces'. It was the transdisciplinary designer team's intent that office landscaping should by no means resemble the strict, geometric layout of workspaces associated with American open-plan offices. Eberhard and Wolfgang Schnelle would call their design goal an irregular rhythm. As one can read in a small brochure about *Buch and Ton*:

> A transparent and generous effect is produced through the furniture design. The irregular rhythm of the arrangement and its chromacity structure the perception of the space: it is only the close-up range that is perceived, so that each workplace produces a subjective space that creates intimacy. Moveable room dividers and plants provide visual protection, as well – they delineate circulation routes and work group areas.[16]

The paradoxical phrase *irregular rhythms* – a rhythm which knows no symmetry, follows no regular motion, no regular repetition, but is instead irregular and non-cyclical – accurately articulates the humanistic and political hypothesis of the planners and the aspired merging of two different modes of work and life: a merging which on the one hand allows the labourer to be autonomous in his and her decisions, allows her or him to follow a mode of work-life and rhythm that he or she desires and which is no longer provided by the mechanic machinery or the conveyor belt, and on the other hand enables this work-life within a spatially and societally confined mode of the rationalised apparatus.

Every single working individual in the cybernetically optimised administration space needs to realise himself or herself not as one of a herd of crowded cattle (Marx)[17], but as an autonomous subject on equal terms with everyone else: a working subject in a familiar atmosphere and on the same hierarchical level as and in spatial proximity to the manager. Although the office landscape looks chaotic and irregular, a strict, meticulous, virtually totalitarian order operates within the arrangements: an order that is bound to a conceptually autonomous but interdependent individual, and to strict rationalism. In other words: the space that houses this cybernetically organised labour society seems to be extensive, almost endlessly vast, but in fact is marked by a clear border which limits the labour organisation and holds it within clearly marked confines. Its interior figuration appears to be irregular, indeed chaotic; nonetheless, a strict and meticulous order reigns.

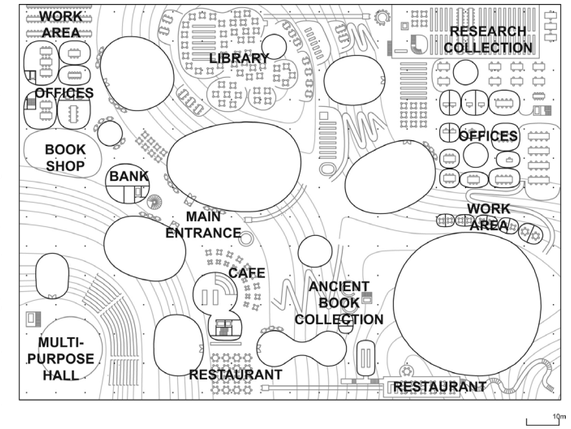
The space of *Bürolandschaft* is organised by a network-like organisation of an ideally completely transparent information flow between all actors – be they human or non-human – placed in small teams in the space. The relational dependency of the actors in the network of information flows ensures a system that achieves the best possible performance; an arrangement that focuses on company profits and whose design is unified, measurable, and verifiable. It has been designed as a sealed-in mechanism that is highly flexible in its interior. At the same time, *Buch und Ton* was only a relay for a much wider and much more expansive space of the similar cybernetically organised Bertelsmann mail-order business. This network-like expansion, which covered the whole of Germany by the early 1960s, works through its continuous feedback-loops, permanently rationalising the production-distribution-consumption process.

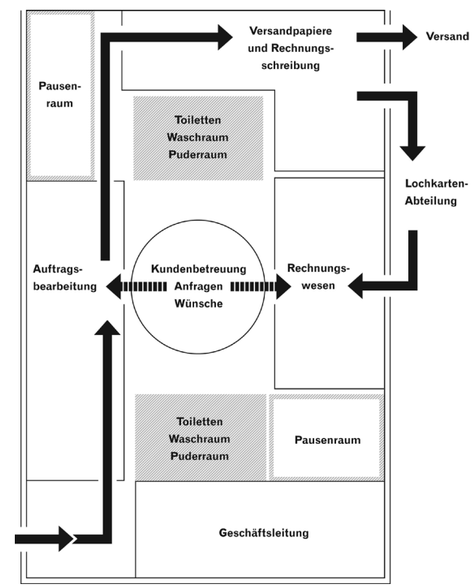
ROLEX LEARNING CENTRE'S ICONIC LANDSCAPE

So far I have shown how the introduction of cybernetics and its application as design-method radically re-organised the work process to become a flat hierarchy in which all labourers are on equal terms. With the introduction of automats and calculators this new *modus operandi* freed labourers from tedious – that is repetitive – work processes: on the one hand into an ever-lasting spare time; on the other hand labourers became, as the terms went, researchers and specialists that were required to work in teams and urged to communicate in a formalised way with their co-workers. I then showed how this re-organisation implied a new, highly flexible interior organisation and how this translated into a spatial design creating 'subjective spaces' with a visually irregular rhythm. I touched briefly upon the efforts of the designers of office landscape to eliminate all status symbols within the space, in order to create a horizontally organised space. The aim was to create a space that had no symbolic quality; one which, like the layout itself, like the entities distributed within the space – be it the labourers, the machines or the work spaces – could be re-figured and re-programmed at will and, potentially, could do this in a self-organisational manner.

Turning now to EPFL's *Rolex Learning Centre*, differences and alterations to *Bürolandschaft* come to mind that directly relate to an advanced knowledge economy and to contemporary forms of immaterial labour in the interior (Figure 6). This is not related solely to the approximately four to five times larger gross-floor area of the *Rolex Learning Centre* than that of *Buch und Ton*. *Bürolandschaft* and its workgroups have been organised in a strict circular way according to the principle of feedback loops. There was one distinct entrance and one explicit direction of information flow within the organisation (as seen in the diagram of circular work process): from order management to dispatch papers and accounting either directly to the shipment organisation, or via the punch-card division to accounting. Central to the space was the customer support division. The management,

as well as the break room, was placed outside of the production circle at one end of the space (Figure 7). Only the toilets and lavatories were fixed in the whole layout of *Buch und Ton*. Rolex Learning Centre is different in this respect. SANAA's space is cleared of these facilities: the lavatories have been abandoned to the basement. The former customer care unit in the centre of the space is now both the entrance and the reception desk, helping the contemporary customers of the university – the students and researchers – upon their arrival. The space radiates from its centre towards the different functions of the building. Thus it is not only one programmatic circle that constitutes the organisation of the space but many: to the multimedia library, to the research collection, to the auditorium, to the open workspaces, to the café, to the restaurant. One can wander through the building, make oneself a place to work, to learn, to meet and chat anywhere on the slopes of the undulating floor (Figure 8).





The formerly strictly calculated and formalised design of 'subjective spaces' and their irregular rhythm have made way for a much more subtle and sustainable experience. Once immersed in the off-white environment, one does not feel in a university building, in a library, or in a working and learning space. Indeed, the *Rolex Learning Centre* is not just a liveable sphere. Even though it is pure global architecture, complying to international standard and built by the biggest construction company in Europe, the *Rolex Learning Centre* is certainly not the anonymous Non-Place (Augé) that the cyberneticians of the 1950s and 1960s dreamt of as being the ultimate emancipatory space. Times have changed. The space has been financed by a high profile corporation that demands a certain image and 'pizazz' in return for its investment. The consequence is a building with a strong formal gesture despite the architect's self-effacing attitude: an architectonic icon, a flagship for EPFL. Consequently, the interior creates an all-embracing atmosphere. The pared down efficiency of the strictly calculated office landscape has relaxed into a much more atmospheric space for learning and research. Despite its complete openness the building seems to be fixed in its use. SANAA's architecture cannot be as flexible as the open horizontal space of *Buch und Ton*, since its different function has been fixed during the planning process. It can no

Opposite
Figure 6: SANAA: Rolex Learning Centre, Interior view. Photo: SANAA - image supplied by Andreas Rumpfhuber

Above Left
Figure 7: Interior concept of circular work-process: order management, dispatch papers and accounting, shipment, punchcard division, accounting. Central to the space is the customer support division. Management, as well as the break room are placed outside of the production circle. Re-drawn by the author, © Archive Andreas Rumpfhuber

Above Right
Figure 8: Interior organisation and distribution of functions in the Rolex Learning Center. Drawing by the author

longer be open to different programs or different identities, since its physical space has been determined. To become an icon, to have an identity in the first place, the building had to fix its program and the distribution of its functions, even though it is an open space.

The *Rolex Learning Centre* also establishes an altered idea of the working subject's space. It is of importance that the economic framing, as well as the ideological vanishing point, has radically changed since the 1960s. A stable economic condition based on the theories of Keynes in which the capitalist market was conceived of as one sphere amongst others within a national 'container' gave way to Mario Tronti's *factory of society*[18]: the formerly clearly confined Fordist factory spilling out into the city. With this, I argue, architecture becomes something else: the spatial aspect of a form of immaterial production diffuses into society, corresponds with no traditional manufacture of physical products, and is no longer housed in mono-functional containers (as the concept of the 'functional city' of the CIAM Charter of Athens still suggested), but defines itself through communication, opening up the challenge for a contemporary workplace architecture.

In the 1960s one could still identify an outside to a factory as well as an outside to capitalism: social liberalism. Every European nation state intervened in the capitalist market and allocated welfare for every citizen. Today, even the nation state is being dealt with as a corporation that can go bankrupt. In the 1960s it was not cynical to free people into an ever-lasting spare time, or to upgrade workers to researchers. Ideally speaking, in post-war Germany one effectively believed in the 'End of Labour', or at least one knew that the welfare state cared for those without jobs. At the same time the *Bürolandschaft* concept – in line with its cybernetic base – aimed to create subjects acting autonomously, but always in relation to a common goal and in relation to a democratic, consensual and open society at large.[19] Since then the economic framing has changed radically towards the factory of society. Thus one needs to read the interior organisation of the *Rolex Learning Centre* not only as an overwhelming subjective experience with its different atmospheric zones, but as a space mirroring an advanced form of knowledge economy. The people wandering through the undulating interior landscape in Lausanne are a priori autonomous researchers; they are already that which the inventors of *Bürolandschaft* aimed to create. They are all creative, and need to have a sense of entrepreneurship, since they all need to become active and take up responsibility for their own actions and their own future. The most significant difference to a Post-War European idea of the welfare state is that most of the people in the space do not get paid to learn, to do research, and to have ideas. On the contrary, they need to pay tuition fees to be part of the organisation and to use the space.

In understanding the *Rolex Learning Centre* as a sophisticated space for a specific contemporary mode of knowledge economy and its production mode of immaterial labour – which has blurred the formerly clearly divided spheres of working, living and leisure – one of course needs to rethink the conception of its users and inhabitants and their use and inhabitation of the building. Thus when young tuition-paying students, international scholars and scientists as well as architectural critics wander through the white and sheer endless interior landscape of the *Rolex Learning Centre*, they are not, however, just there for the fun of it. By chatting within its compound, every single student, researcher or faculty member produces or is learning to produce knowledge that is a commodity within an advanced knowledge economy. He or she learns how to express ideas, how to communicate with others, convince them of their ideas, and come to conclusions as a group of experts. Every time an architectural critic or theorist writes about the space, be it by heralding the architecture, or, as I am, by critically assessing the building in relation to its underlying economy, she or he is 'adding value' to the image of EPFL. It is not a common, openly accessible knowledge that is being produced; on the contrary, it has an essentially surplus value as knowledge for EPFL (and the generous donator of the space). Every idea that is potentially generated in and about SANAA's *Rolex Learning Centre* is subject to evaluation and is legally already owned by the institution. The organisation of space no longer focuses on team-building but on the production of immaterial goods – namely knowledge for a knowledge economy. The clearly designed 'irregular' rhythm of the *Bürolandschaft* dissolves into an endless time-continuum when you wander through the *Rolex Learning Centre*. The economic paradigm has shifted away from arranging labourers in teams in an interior and towards the organisation of individuals as 'knowledge entrepreneurs' in an open space.

NOTES

1. The research presented in the text is funded by the Austrian Science Fund (FWF): P 22447-G21. My research project 'The Architecture of Cybernetics of Organization, The Production of office landscape' proposes the first comprehensive and systematic documentation of the 'architectural' works of German management consultants Wolfgang and Eberhard Schnelle and their trans-disciplinary team from the late 1950s until the mid 1970s. Most of the material used in this text comes from the German-only archive.
2. Sejima, Kazuyo & Nishizawa, Ryue. 'Rolex Learning Center EPFL', El *Croquis* 155, SANAA, inorganic architecture 2008-2011, 2011.
3. For example: Della Casa, Francesco & Eugène. *Rolex Learning Center.* Lausanne: EPFL Press, 2010.
4. Della Casa, Francesco & Eugène, 29.
5. For example: Holt, M. & Looby, M. 'SANAA: Falling Upwards', online: http://www.domusweb.it/en/architecture/sanaa-falling-upwards/, Gregory, R. 'Rolex Learning Centre by SANAA, Lausanne, Switzerland', online: http://www.architectural-review.com/buildings/rolex-learning-centre-by-sanaa-lausanne-switzerland/5217744.article.
6. I explicitly refer to the seminal text of Lazzarato, Maurizio. 'Immaterial Labour', online: *http://www.generation-online.org/c/fcimmateriallabour3.htm*. For a discussion on the Architecture of Immaterial Labour refer to: Rumpfhuber, Andreas. *Architektur Immaterieller Arbeit.* Vienna: Turia und Kant, forthcoming 2012.
7. Cf. Lotringer, Sylvere (Ed): *Autonomia: Post-Political Politics*. (Los Angeles: Semiotext(e), Foreign Agents Series, 2007).
8. Physiocratism was an economic theory dominant particularly in the second half of the 18th century and is immanent in the spatial organization and representation of the Salt Works. Its most important protagonist was the French physician François Quesnay (1694-1774) who published the most influential 'Tableau Economique' in 1758/59. With the tableau Quesnay wanted to conceptualize the economy by way of a circulation diagram.
9. Cf. Wallenstein, Sven-Olov. *Bio Politics and the Emergence of Modern Architecture. (*New York: Princeton Architectural Press, 2009).
10. Rumpfhuber, A. 'Space of Information Flow – The Schnelle Brothers' office landscape Buch und Ton', in *Experiments, Architecture between Science and the Arts,* ed. Akos Moravansky and Albert Kirchengast, (Berlin: Jovis, 2011), 200-225..
11. For an elaborate discussion of *Buch und Ton* office landscape as the prototype of a control-society space refer to Rumpfhuber, A. 'Space of Information Flow – The Schnelle Brothers' office landscape Buch und Ton', in *Experiments, Architecture between Science and the Arts,* ed. Akos Moravansky and Albert Kirchengast, 2011, 200-225.
12. Schnelle, Eberhard: 'Cybernetics of Organization'. *Kommunikation* 1/1965: 3-10.
13. Alsleben, Kurd: 'The Office Landscape and its Subjective Spaces.' *Kommunikation* 11/1965:
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