

POLITECNICO DI TORINO
FIRST SCHOOL OF ARCHITECTURE
Master of Science in Architecture
Honors theses

Architect's new pencils

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Everyone can see the evolution of architecture design in the last fifteen years: nowadays some practices that were unpredictable a few years ago, such as sharing drawings, all along the globe, are now used by architects in everyday's working life.

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e distruggete le *righe, squadre, parallele, righe a T, doppi decimetri, compassi di riduzione, goniometri, scale, ecc.* Di tutti questi strumenti non ne avrete più bisogno perchè sono compresi nel **Tecnigrafo**. Solamente con esso voi eseguirete disegni di tutte le specie, con precisione assoluta, pulizia e rapidità.

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Altre specialità esclusive della Casa: Tavoli da disegno moderni, inclinabili, alzabili ed abbassabili automaticamente.
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Advertising appeared on "The Italian architecture" of 1910: a clear step in a century

However **the new instruments for the representations are quite scarce to the necessity of planning** and force the perverse need to be specialized in computer' software knowledge rather than using new technology as an integrated part of planning.

The tool becomes **not only the vehicle** to express architectural ideas, **but also a bond** that influences the author's practice and the concept itself.

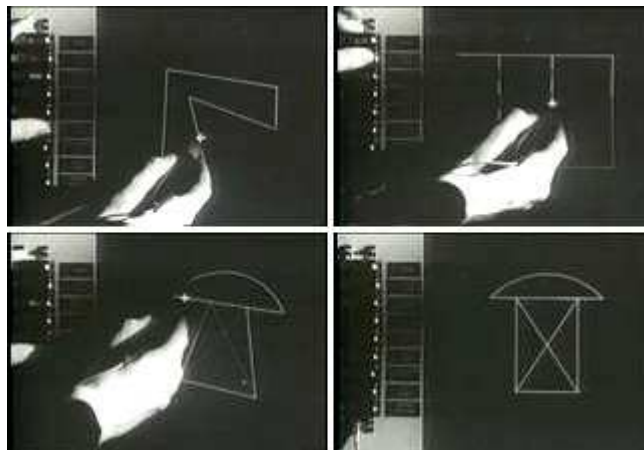
The Drawing, Architecture's Language

Drawing has always been the architectural language: a way by which the planner could unequivocally communicate his own idea of form to all his interlocutors such as clients, workers, collectivity, colleagues. **Drawing is a communication downright expression**: just like writing, it is a cognitive artifact through which mankind has transmitted its own progress over centuries.

The instrument influences the design

On one hand the use of computer drawing influences **the approach** by which the architect or town-planner is working; for example, the loss of the differentiation in the drawing relative to the scale, space drew through volumes and the consequent weakening of the concept of emptiness, the steady use of “copy” and “paste”, etc. On the other hand **the way** of working of architect is completely conditioned: the impossibility of execute easy and steady foreseen operations and the lack of common rules which helps the sharing process are limitation which create an obstacle on every days working life.

Besides there are other problems connected to the difficult balance between the **complexity of the tools** and its potential: while simple software might be very easy to use, but only provides partial operations, powerful software is often too complicated.

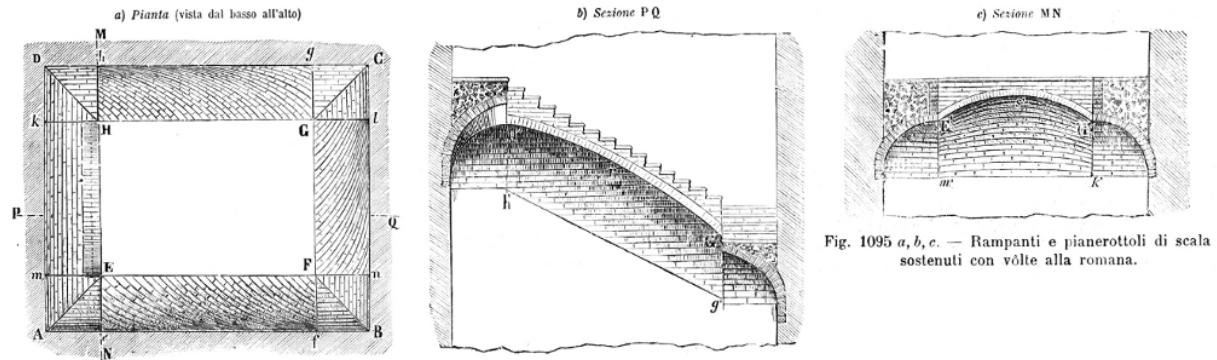


Sketchpad was the first program that revolutionized the methods of interaction with computers and was the predecessor of the current graphics programs, introducing the concept of direct manipulation and that of metaphor. Sketchpad allowed instances of geometries, snap and even three-dimensional parametric modeling

The interface: the “human” side of machine

This thesis investigates the quick evolution of designer software to understand on which rules it is based, through the development of users' interface: logical rules, physical rules, rules imposed by our unconsciousness and cultural rules.

Video games are a specific type of software, which more than others satisfy the peculiarity of immediateness and involvement. Through the investigation of these kinds of interfaces, we can discuss some current practices.



Make a drawing like this with a CAD software is extremely long and laborious

Conclusion

It comes out the problems of sharing, **saving and keeping for the future, the work done** with commercial software: we need a strong awareness of the problem of the creation of a global standard file format for Cad.

It's evident the necessity of **creating free software made on purpose by architects** for architectural design. The role of "Schools" is teach planners the knowledge to "freely choose their pencils", without being under economical pressure.

Appreciating "graphic art" as a wonderful expression of human thought, we have to be interested in new ways, methods and technologies, which let us move from the thought to the physical medium: especially, when those thoughts coincide with architectural planning.

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