AN EVALUATIVE APPROACH TO ARCHITECTURAL VISUALISATION

EDWARD NG
School of Architecture, National University of Singapore,
Kent Ridge Crescent, Singapore 119260

Abstract In the forthcoming globalisation and virtual almost everything, we are indeed reliving a moment of history when, at the turn of the century, machines replace craftsman in mass-producing goods quicker, cheaper, 'better' and faster for the mass market regardless of the appropriateness in using the machine. So much so that the recent proliferation of computer graphics has reached a stage where many are questioning their validity and usefulness in the advancement of architectural discourse. This paper argues that the pedagogy of the use of the new tools should be effective communication in vision and in representation. In short, saying what you do and doing what you say, no more and no less, or to be 'true' and 'honest'. The paper tries to provide a hypothetical framework whereby the rationale of drawing could be more systematically understood and criticised, and it reports ways the framework is introduced in the teaching of design studio. The focus of the experimental studio (Active Studio 1.6 beta) is to enable the substantiation of ideas and feelings through a critical manipulation of medium and techniques. The results are narratives whereby the expression of intention as well as the drawings are both on trial.

1. Prelude

According to ancient wisdom, architects make images from ideas. Theologians were fond of quoting St Thomas Aquinas on this theme. An architect, wrote Aquinas, first has an idea of a house and then he builds it. God made the world in a similar fashion. Aquinas's architect still haunts us; he thinks, therefore he draws. He draws the bodiless but fully formed ideas from the mind and puts them on paper, just as Ernst the elder put trees on canvas. But Aquinas's architect is a figment. There may be such creatures, but they would not be possessed of much in the way of creativity; quite the contrary. Imagining with the eyes closed, as if the whole world were held in the mind, is an impossible solipsism. The imagination works with eyes open. It alters and is altered by what is seen. The problem is that if we admit this, then the relation between ideas and things turns unstable and inconstant. Such deliberation is bound to affect our understanding of architectural
drawing, which occupies the most uncertain, negotiable position of all, along the main thoroughfare between ideas and things. For this same reason, drawing may be proposed as the principal locus of conjecture in architecture.¹

2. A dilemma of Computer Aided Drawing

The recent proliferation of computer graphics has reached a stage that many are questioning their validity and usefulness in the advancement of architectural design.² Surely, we can argue that it is a must for the forthcoming globalisation, internationalisation, just-in-time, concurrent design, tele-conferencing, remote synchronisation, and virtual almost everything. And if we are not doing it, we may risk missing the boat! But are we just jumping onto the wagon without first knowing where it is heading or, worse still, are we simply reliving a moment of time when, at the turn of the century, machine replacing craftsman in mass-producing all sorts of goods to satisfy the mass ‘market’ without due care paid to the authenticity of the new tool. Surely, it is easier, quicker, cheaper, ‘better’ and faster, but are we doing all these and at the same time missing the point, or worse still further dissociate the act of architecture from the act of design?³

2.1 THE ISSUE OF STRUCTURE

When Maya Ying Lin won the competition to design the Vietnam Veterans Memorial in Washington, D.C., problems arisen as to how to engraved the names onto the black granite. To many the straight forward answer was to do it alphabetically. So 600 Smiths would be listed together and 16 James Jones would be side by side of each other irrespective of the events and personal particulars of the individual. In short, it is going to look like a telephone book. But Maya disagreed insisting that they should be listed by date of death, she wrote, “... chronological listing was essential the design. War veterans would find their story told, and their friends remembered, in the panel that corresponds with their tour of duty in Vietnam. Locating specific names with the aid of a directory would be like finding bodies on a battlefield.”⁴

The structuring of the names serves a number of functions. It memorialises each person who died. It makes the mark adding up the total. And it indicates the sequence and approximate date of death. The spirit of the individual as synergised on the wall, both of each death and of each visitor, decisively affects how we see the interaction. The deaths are no longer mere memories, they are the actors, their names are lyrics. And the visitors are no mere tourists, they are part of an architectural performance, as colleagues of the deaths.
Now imagine that Maya were not to decide the listing of the deaths. Instead she is going to choose from say one of the five methods of listing presented to her by her computer software, and let say the five methods are by ascending order, by descending order, by rank of office, by States and by the colour of their eyes. So what is going to happen? If either by ascending or by descending order is chosen, the memorial will look like a gigantic phone book. If by rank of office is chosen, the memorial will be a symbol of status where the first name is the most important and the rest are just happening to be there. If by States is chosen, the memorial will be a statistics table denoting the contribution of the various regions. And if by the colour of their eyes is chosen, people may after all come to realise that the artist is either mad or not in control. Whichever way it goes, the meaning of the memorial would be quite different from what Maya would have in mind.

Unlike traditional media where the sequence of making may not be important, computer generated drawings have a hidden structure behind it. The structure is contingent upon two factors: the programmers' signature, and how the programmer want the way you sign yours. Each computer programme have its own structure of representation which is unknown to the designer - unless you happens to know a lot about computer. The structure dictates the mode of interaction between you and what you are going to see on screen. The structuring of the computer software, which is designed by software programmers with absolutely no knowledge of the project you are supposed to do, is going to have an impact in your 'act' and your 'idea' of drawing. And eventually it will even have a mark on the 'object' of your drawing which is completely divorced from the 'social practice' of the discipline you are in.

2.2 THE ISSUE OF PROCESS

Before the Industrial revolution, artefacts are painstakingly craved by the workman and signed. Nowadays, we think that is ancient and that with the touch of a button the CAD/CAM machine will turn out thousands of the same in no time at all. To make thing more interesting, we could even compose our 'design intention' on our beloved word processor, print it and enclose it with each copy of our creation. Well, not to forget that the enclosed 'statement of design intention is computer produced and requires no signature'!

In the 17th centuries, it is part of the required 'module' for learned gentlemen to go on a Grand Tour. They observe, measure, sketch, paint, copy and even steal in the hope of bringing home a piece of the foreign culture. Nowadays nobody go on holiday with their easel, paint brushes and canvas. If you do that people might have a different opinion on you. Instead we all have cameras and we take pictures. It is becoming so easy.
Some 15 to 20 years ago, one used to draw and letter. Now one compute. One compute plans, sections, elevations and most important of all the beloved perspectives. And when computer is becoming fast enough one can even compute images, reality and being and, some AI enthusiasts would like to see, thoughts. It is becoming so handy that we are beginning to lose the ability to process drawings.

2.3 THE ISSUE OF PERCEPTION

Ian Richite, an English architect and one of the early adapter of computer aided design in his office, admitted that he seldom shows a computer generated drawing to his client. When asked why, he simply answered that no matter how well they are done, they do not seems to look right, somehow something is very wrong about them. When pressed, he revealed that there is a problem in the feeling of ‘weight’. What Richite experienced, which he was unable to pin down, is what Gestalt psychologists coins: the illusion of form. That is to say, there is a difference between ‘real’ reality as one is accustomed to and the ‘depicted’ reality through the use of representational media like photographs, paintings and drawings.

In perception, the eyes are searching not for geometrical form but for meaning. Or as some anthropologists would like to call it: the innate nature to seek and distinguish for the reason of survival. There is no point seeing ‘a triangles and two circle and a rectangle’ running towards you if you do not see it as a ‘car’. Likewise, a rectangle within a rectangle can be a door, or it can just be a reveal. The interpretation of the shapes has a lot to do with our intention, and our intention in turn is conditioned by what we interpret. The two are inseparable.

Using traditional medium, an artist will select a vintage point which best capture the essence of what he is trying to express of the object. He will draw it in such a way that a thicker line on one side denotes light shining from the other side. The darker tone at the bottom denotes the mass of the object. The wobbly line on top denotes the level of workmanship achieved. And its position as related to other objects denotes its exclusiveness. In short, the drawing is a container of meanings beyond the object itself. What happens when the object has to be drawn from the other side. Does it means that the thicker ‘line’ on the right should be flipped to the left? Does it means that the other objects behind should now be drawn in front? What kind of message is this new drawing going to give? If drawing is a truthful representation according to the laws of perception and drafting is a truthful representation according to the laws of physics, then one can say that it is the skill of the artist to realise the differences and through ‘twisting’ and ‘augmenting’ reality he achieves reality which is perceived to be real.
3. In Search of a paradigm

The issue of structure, process and perception as delineated above are just some of the main issues facing architects when executing their design ideas using computer. In brief, the issue of structure detaches the historical process of drawing from the architect’s drawing process. The issue of process detaches the selection of the appropriate medium from the drawing process. And the issue of perception detaches the meticulous process of applying techniques from the drawing process. It is precisely because of these issues that computer generated drawings are different from traditionally drawn drawings.

For many years the author has attended numerous design reviews whereby students presenting CAD drawings are unnecessary disadvantaged, or advantaged depends on who is looking at it, by the design critics. Most of the times, the drawings were subjected to the same kind of representational schema of traditionally generated drawings. That is to say they are being look at and criticised as if they were hand-drawn. In some cases CAD drawings were unfavourably compared with the ‘human’ quality of hand drawn drawings whereas in others it was praised for its richness and elaboration beyond the design itself should warrant.

Much of the problem is due to the lack of a critical measure against which the value of the drawings could be gauged. We simply do not have the critical tool to evaluate CAD generated drawings. as delineate above, the process, the structure and the perception of CAD generated drawings can be very different from that of traditionally drawn drawings.

A new critical paradigm is required to evaluate the value of computer generated drawings. The pre-requisite of achieving that must be the development of a language upon which the key reasons for a drawing to exist in architectural design could be re-established. To begin with, we should be able to point our fingers to a CAD drawings and say that it is a plan even through strictly speaking it is a perspective. Alternatively, we should be able to say that a plan-look-alike CAD drawing should not be regarded as plan and therefore should not be subject to the same kind of critical judgement of a plan, like dimensional consistency. At another level, a computer generated perspective may not have to be seen as an instance of the design but rather as a key, a content page, or a navigator of the design whereby what it is is not as important as what it can point to. Thus subjecting a computer generated perspective to a critic of a subject/object relationship is largely inappropriate.

To investigate the language required to establish the identity of a drawing, it is necessary to approach the subject from first principles.
Therefore it may be appropriate to examine the semantics governing the 'key reasons' for drawing from the design, as a creation, point of view.

4. A dialectic observation

Rumour has it that not that long ago a certain famous painter took the opportunity to paint a seated lady. After a number of sessions, the model was revealed the finished painting and she was duly shocked. What was in front of her was a ‘beast’ which could hardly be called human. The model complained but the painter calmly replied while putting the finishing touch to his work that: don't worry my dear, you will one day grow to look more like it. The painter was Pablo Picasso and the painting Seated Woman, 1920.

Regardless of the source and accuracy of the rumour, there are two ways to interpret the story. One way to look at this is that the painting was painted in such a way that when studied closely the inter essence of the model could be detected 'between the stokes', and that the value of the representation was not to bring out the physical being of the model but rather was to extract her personality and character. The painting was conceived as 'an abstraction of the model'. The other way to look at this is that the painting was a visionary depiction of a trend, and as such in future it would be perceived and accepted as if it was a true copy of the model at her present state. In short, the painting was conceived as 'an abstraction of the social construct'. Whilst the first abstraction is to bring the viewers closer to the qualities of the model, the second is to aspire the viewers to see the model in a different light. In other words, the first is a representation of the object and the second is a manifesto of a vision.

The dialectic observations of the event haunts us as architects, for it challenges our notion of what a painting should be? What is it trying to do? And what is it try to say? The answer, as illustrated, may not lie in the painting itself, but rather in the subject, the intention and the process which lead to the final production.

5. Drawing as a theme and as theses

Architecture is a visual practice, and drawings are fundamental to the pursuit of this art form. The practice of drawing did not come from architecture. Prehistoric hunting-gathering societies could draw before they could build - as ritual image, as sympathetic magic, and as story-telling, drawing has served as a totem, a palladium, a mnemonic, and as an important instrument of human creative practice. Furthermore, materially constituted, drawing is at once a phenomenal representation of a conceptual practice; an idea, an act as well as an object. It is not for nothing that Gehard of Brugge argued, "The
art of drawing ... may justly be called a bearing mother of all arts and sciences whatever ... The art of drawing is the beginning and end, or finisher of all things imaginable.\textsuperscript{9}

![Diagram of Drawing](image)

**Figure 1.** A schema of drawing

<table>
<thead>
<tr>
<th>WITHIN</th>
<th>TO do something</th>
<th>USING a technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>a context</td>
<td>FOR a purpose</td>
<td>WITH a medium</td>
</tr>
</tbody>
</table>

**Table 1.** Vocabulary used to construct a schema of drawing

<table>
<thead>
<tr>
<th>WITHIN</th>
<th>TO</th>
<th>FOR</th>
<th>WITH</th>
<th>USING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self: idea formulation, initial design, scheme design, detail design, production design. Collaborative, architect vs: architect, client, consultant, contractor, specialist, user. Informative, architect vs: public, authorities, client, consultant, ...</td>
<td>communicate, record, illustrate, suggest, cement, educate, share, avoid, join, present, clarify, direct, order, guide, dialogue, visualise, explore, convey, structure, sell, explain, discuss, provoke, measure, co-ordinate, interpret, sense, craft, be understood, intimidate, mystify, test, feel.</td>
<td>idea, point, concept, statement, development, process, theory, identity, construct, making, production, background, rationale, scale, actual condition, organisation, itself.</td>
<td>plan, section, elevation, model, perspective, axonometric, isometric, painting, collage, word, report, sketch, doodle.</td>
<td>worm eye, exhaustive, direct, realistic, reproduction, freedom, precise, softness, slightly above, large, concise, quick, distance, exaggeration, embryonic.</td>
</tr>
</tbody>
</table>

Such is the significance attributed to the practice of drawing that no shortage of academic expositions has been spared on the subject.\textsuperscript{10} A research of the texts reveal that regardless of the various authors' and designers' viewpoints and preoccupation, a theme of construct seems to have run through their theses. This is summarised in Figure 1. For example, Edward Cullinan is known to have revealed that 'within' the client/architect interaction, the need 'to' communicate 'for' the purpose of clarification could be achieved 'with' plans and sections drawn 'using' thin but clean lines, and 'using' them as templates to doodle over.\textsuperscript{11} A summary of words used by architects to describe their approaches to drawing is summarised in Figure 2.\textsuperscript{12}

An understanding of the schema and the vocabulary used for drawing in architecture is crucial in our investigation into the role played by drawing in the practice of architecture. In Figure 1, the schema is constructed of five keywords. The three keywords bound by the left hand side of the schema
can be regarded as the reason for the need of drawings while the two keywords on the right is about method and technique. In summary, the keyword 'WITHIN' denotes the overall environmental context justifying the need for drawing. The designers' need to respond to the context is denoted by the keywords 'TO' and 'FOR', while the medium and technique which could be employed for the task at hand is given by the keywords 'WITH' and 'USING'. Thus, working in reverse, a technique or a medium could only be meaningful if the environmental context and the need to respond to it is known. As such, for example, Picasso's Seat Woman could not have been understood if the broad environmental context upon which the painting is based is not known. In hindsight, it appears that the value of the painting, as constructed by the painter, is more of a manifesto towards a vision than of a representation of the model.

6. A Vision or a Representation

As Robbins pointed out, a drawing could be a representational construct of an object, or itself an object which denotes a vision. As a representation, drawing yields to an apparently intractable web of everyday institutions, rules and social forms. It is constrained, to the extent that the ultimate goal is to become a built object, by the professions, institutions, economies, and the social practice of production. On the other hand, as a vision, drawing manifest a subjective and tractable everyday world of ideas, and the infinitude of possibility defined by our capacity to symbol. It is free of reality and constraints. It can be reveal, and even revel in, its own biases and notions about utopia, perfection, or any other thesis it is there to address.

<table>
<thead>
<tr>
<th>representation</th>
<th>keyword</th>
<th>low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>within</td>
<td>feel, mystify, intimate</td>
<td>self</td>
<td>client, architect, consultant</td>
</tr>
<tr>
<td></td>
<td>suggest, join,</td>
<td></td>
<td>authority, contractor, public</td>
</tr>
<tr>
<td></td>
<td>direct</td>
<td></td>
<td>communicate, record, cement, clarify, order, be understood</td>
</tr>
<tr>
<td>to</td>
<td>idea, concept, theory, itself</td>
<td>statement, development, process</td>
<td>point, identity, construct, making</td>
</tr>
<tr>
<td></td>
<td>actual condition, organisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for</td>
<td>sketch, doodle</td>
<td>word, collage, concept model</td>
<td>section, isometric, axonometric, perspective, model</td>
</tr>
<tr>
<td></td>
<td>plan, elevation, report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>with</td>
<td>using</td>
<td>worn eye, freedom, quick, embryonic</td>
<td>softness, distance, exaggeration</td>
</tr>
<tr>
<td></td>
<td>direct, realistic, reproduction, precise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vision</td>
<td>within</td>
<td>authority, contractor</td>
<td>public</td>
</tr>
<tr>
<td></td>
<td>client, public</td>
<td></td>
<td>self, consultant</td>
</tr>
</tbody>
</table>
To understand more fully the role of drawing as a vision and as a representation, the schema of drawing developed above is used to provide a systematic framework of investigation. A semantic differential matrix is constructed providing a ranking of words used by architects against the 5 keywords (within-to-for-with-using) under either the heading of representation or vision. The matrix is used to inform the researchers the perceptual classification of the meanings of words used by architects as well as the significance of each word in achieving the notion of representation and/or vision. A brief survey was conducted with designers ranging from university students to experienced architects in practice. A summary of their responses is captured in Figure 3.

The survey reveals some interesting thoughts, not least of which is the apparent difficulties architects have in trying to put exact meaning to words. The most common query to the researchers is 'it depends'. Though there are still scopes for further clarification and not withstanding the limitation of a survey like this in extracting information on the complex issue of drawing in the context of the design process, a general pattern seems to have arisen which serves to differentiate the theme for representation and that for vision. In summary:

- Basic and simple sketches and doodles seems to be effective both for representation and for vision.
- Interestingly enough, orthogonal drawings are ranked more appropriately than sophisticated 3D drawings for representation due to their dimensional consistency and 'independency of view point'. Likewise, doodles and sketches are preferred for the freedom and ambiguify they offered. They are also used for their speed and simplicity.
- A change of viewpoint is reckoned to have an impact on shifting a drawing's emphasis from one of representation to one of vision.
The proportion of the 'useful' and informative portion of the drawing against the background material could be used to denote the degree of 'vision' of an idea. In general the greater the proportion, the more definitive an idea.

Perhaps the most important thing to note is that the act of drawing is not neutral and could not be indiscriminately appointed. The notion that a design could be viewed and presented independent of its creation is not endorsed in the research findings. On the contrary, architects are found to constantly reviewing and correcting their drawing to conform to their own interpretation to a need in practice. It is recognised that some categories of drawings are more suitable than others, and that the technique and discretion used in the execution and in the process are as important as the forming of the design idea in the first place, or else, as Eisenstein summed it up very nicely, 'When ideas are detached from the media used to transmit them, they are cut off from the historical forces that shape them.'

7. Drawing Assistant 1.0

So far it has been established that it is possible to dissect the reasons for drawing with a schema based on 5 key factors. It has also been established that various keywords could be inserted as suitable to drawing for vision and representation and that a ranking of their suitability is possible. Since the framework was constructed based on a key reason to drawing approach, it is assume that the same could also be used on drawings which are created for a similar purpose but using different tools. The assumption is of course based on the notion that there is a consistency in architectural design on the scope and nature of the drawing process. The author acknowledge that this is refutable but for simplicity this variable is taken for granted because in the majority of cases the drawing and language process is evolutionary and not revolutionary.

To further our research in the development of a descriptive language for computer generated drawings, the research has now been concentrated on the creation of Drawing Assistant 1.0. The Assistant is a research tool and a web based database to assemble a library of CAD generated drawings and at the same time conduct surveys to establish a generally accepted language which is could be used to describe them. A work-flow of the database is as depicted in Figure 4 and some of the interfaces could be found in appendix A.
The work-flow forms the basis of a database whereby the images and their critical keywords and could be constructed and later on accessed. The idea is to enable inexperienced designers to retrieve examples of images and the techniques employed by using keywords like 'to communicate', 'to feel' or 'to mystify'. Realising that the use of a certain medium and technique has a 'it depends' factor and that even a slight twist and seemingly minor changes to a drawing could have given it another meaning, the database is not meant to be definitive. Instead, it serves as a guide to direct the eyes to see potentials and possibilities.

Apart from feeding in the images by researchers and their experimental subjects, the database has an active update function. This is necessary as the database would otherwise be restricted in semantics by the research team. Basically, after each session, the enquirer would be presented with 10 or so images from the database and be prompted to respond whether or not the images could also be used to describe the same keyword or technique the enquirer used earlier on. The presentation of images is entirely random as the researchers do not wish to impose any interpretation to the structuring of the presentation.

Using Drawing Assistant 1.0 involves two stages. In the first stage, a designer would access Drawing Assistant by typing in some keywords which best describe his drawing intention. The database will search and present to the designer a number of images that match the keywords together with a short description of the drawings. This gives a general 'picture' of what the
designer could do. This concludes the enquiry if the designer so wished. However, the designer could contribute to the database by continuing to the second stage of the database. The database is programmed to present the designer a number of images randomly and to ask if the image presented matches the designer idea of the keywords he initially put in. The designer could choose to answer yes or no. Should the designer's answer is yes, the drawing will be tagged with the keywords. It is in a way a voting system. Existing drawings and new drawings will continually be tagged and the keywords that could be used to describe them be continually refined.

Drawing Assistant 1.0 is still undergoing some in-house testing and refinement. It will be released on the web later this year. The aim of Design Assistant is to establish, through common consensus, an appropriate description for computer generated drawings. It is anticipated that through the use of this set of vocabulary a grammar could be evolved, a language could be formulated and an aesthetic paradigm built. This is a very long term goal indeed and no doubt Drawing Assistant is only part of the construct.

8. Conclusion

With the proliferation of computer generated graphics in the design studio nowadays, it is increasingly of importance to ensure that we do not try to train a generation of architects who are wonderful in creating virtual worlds or to replicate the real world and yet at the same time fail to communicate the being and the essence of their design in a critical and responsible manner. In this respect an understanding of the role of drawing both in terms of representation and in vision would helps to foster a sense of system and 'reality' in the growing realm of designing in cyberspace. No longer are architects and clients now willing to accept the surreal fly-by and flip book perspectives without posing difficult questions like: 'it is nice, but is the building really look like that', or 'fascinating, but what are you trying to tell me'.

The system as developed is not to be perceived as a hindrance to design freedom, but an accumulating ground for a new paradigm.

Computer generated drawing has yet to be accepted as a serious replacement of traditional medium, but if we, as researchers and teachers are serious enough, we may see that one day we could "... Remember a time ... When every artist thought he owed it to himself to turn his back on the Eiffel Tower, as a protest against the architectural blasphemy with which it filled the sky ..." and could say with confidence that "...The discovery and rehabilitation of ... Machines soon generated propositions which evaded all
tradition, above all, a mobile, extra human plasticity which was absolutely new ... m1

3 The author has argued in another occasion of the risks posed by the up-coming of cyberspace and cyber-architecture on the destruction of architectural vigour. See Ng, E., 'Enriching the language of graphic representation in CAAD', invited keynote paper, 1st International Congress on Graphics Engineering for Arts and Technical Drawing, Florianópolis Santa Catarina, Brazil, 1996.
4 Surges, J.C., Swedlow, J.L., To Heal a Nation: The Vietnam Veterans Memorial, New York, 1985, pp78-79.
5 In the last year or so, the author has received an increasing number of letters which have the statement 'no signature is required' on them.
8 Paul Richens of Cambridge University has done a lot of research into this area of representation. See Richens, P., Does knowledge really help? CAD research at the Martin Centre, Knowledge Based Computer Aided Architectural Design, Carrara, G. & Kalay, Y.E. editors, Elsevier Science B.V., 1994, pp305-326.
12 The list is a result of examining over 30 texts on studies in drawing and architects talking about drawing. The list is not exhaustive.
APPENDIX A

Welcome to
Drawing Assistant v1.0

CLICK IT try it ...

School of Architecture
National University of Singapore
Kent Ridge Crescent, Singapore 119260
All Rights Reserved

Enter a keyword to search for images, if in doubt, refer to Search.
Drawing Assistant v1.0

Enter a keyword to search for images, if in doubt, refer to Options.

Within Self/Self
To emphasize, heighten, force
For design
With sketches
Using softness, distance

Next matches

Drawing Assistant v1.0

Thank you for visiting Design Assistant. To help making it more useful, please spend some time on the following task... What to do?
For each of the next 10 pictures presented, kindly answer:
YES if it gives you a "to emphasize" feel, and
NO if otherwise.

[Checkmark]
[Cross]