

# The Idea of Descriptive Programming

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Nelson Goodman poses the following question:

The literature of aesthetics is littered with desperate attempts to answer the question "What is art?" This question, often hopelessly confused with the question "What is good art?", is acute in the case of found art—the stone picked out of the driveway and exhibited in a museum—and is further aggravated by the promotion of so-called environmental and conceptual art. —part of the trouble lies in asking the wrong question—in failing to recognize that a thing may function as a work of art at some times and not others. In crucial cases, the real question is not "What objects are (permanently) works of art?" but "When is an object a work of art?—or more briefly, —, "When is art?"<sup>1</sup>

We could easily paraphrase "What is architecture?" into "When is architecture?" or "When is a building or other architectural productions architecture?" While this provokes a rather fundamental discussion about the existential issues of architectural culture, this paper proposes to apply this point of view to the ideas of architectural programming, as developed through Modernism and later ideological development.

"What is —?" is a question fundamentally seeking definition. And this seems to be the core of the discussion of architectural programming, for which, essentially, there are three components: Typology, Diagram, and Metaphor:

*Typology* directly asks a question, such as "What is a library?"

*Diagram* operates on articulating the components, such as "public/private" or "living room/bedroom", which of course requires the definition of articulated components via "What is living room?/What is public?", etc. In

that sense, Diagram relies on the relative definition of articulated components.

*Metaphor* is a method used to manipulate the definition itself, as in the case of "House is a machine for living."

In all three of these cases, the prevalent condition of definition is the *explanation* that follows those definitions. However, as Goodman points out, it may be possible that we are thinking of the ideas of programming from the wrong point of view by relying on definition.

In the case of writers of the fiction, what happens in the story, or how the story is told, can be conceived as a program. It involves the protagonists, situations, plots, ending, etc. Everything the writer writes in the fiction is a result of work imagined from his/her intention of telling the story; therefore, all the lines are essentially fictional, such as when Tolstoy writes; "Anna trembled with joy." In regard to this, John Searle observes a distinction between *fictional statements* and *genuine assertion* in literature:

To make a famous example, Tolstoy begins Anna Karenina with the sentence "Happy families are all happy in the same way, unhappy families unhappy in their separate, various ways". That, I take it, is not a fictional, but a serious utterance. It is a genuine assertion.<sup>2</sup>

"Fictional statement" is what actually constitutes the work of fiction, word by word, sentence by sentence, whose architectural counterpart is the actual building/place as a result of the programming. If we apply the idea of the programming to the writing of fiction, then it is to this "fictional statement" and not to "genuine assertion".

The question is; did Tolstoy write the entire “Anna Karenina” to *explain* his definition of “happy” or “family” as in his “genuine assertion”? Or did he write his series of “fictional statement” in the book as a *description* of the imagined world? In other words, is the entire volume of “Anna Karenina” a representation of the definition of “happy” and “unhappy” or “family” by Tolstoy? Or is it the imagined and presented world by Tolstoy that make the reading experience worthwhile?

In the parallel question of architectural programming, this alternative approach presumes the ability to imagine the series of described situations rather than to explain the resulting situations based on “genuine assertion”. In architectural programming, it seems that it is this “genuine assertion” that drives the discussion of the three programmatic ideas, i.e. Typology, Metaphor, and Diagram. In other words, architects are usually exclusively concerned with genuine assertion as the resolution of the programmatic issues; discussion of which usually leads to “justification” rather than the application of the mechanism of fictional statement as a means of imagining the world as an outcome.

This paper proposes a critique on this definition-explanation-oriented programming, and proposes an alternative point of view, which I have termed “descriptive programming”.

#### FIRST PROBLEM — TYPOLOGY

We come across the newspaper titles as the following:

“Sony Builds a Mall. But Don’t Call It That.” (New York Times, July 25, 1999)

“Where the Shoppers Also Catch a Plane” (New York Times, April 25, 1999)

In the first example, “Mall” is a building type as presumably understood by the readers, though in this particular case, it is obviously referring to a building that does not categorize itself into that type. In order to understand the situation, we have to know two things; one is the definition of mall as a type, the other is why this particular building does not fit into that definition. The reason it does not fit can only be described through specific situations and conditions, and not by a generalizing idea such as “cross between culture and consumerism”, or something to that effect. Does this mean that all we need is a new word that categorizes a kind of building that Sony built?

The second title, on the other hand, informs us differently. It describes a certain situation. It is apparently an abbreviation of “there is a place (or building), where the shoppers can also catch a plane.” It is an article about airports incorporating the shopping (not the usual luxury items associated with tax-free, but more familiar daily life shops like GAP, etc.), in places like Heathrow, Schipol, or Pittsburgh airports. It is a specific description of who they are and what they do in a specific situation.

These titles represent the problem of Typology. In both cases, what seem to matter is the descriptions of these places as conceived and observed, and not the degree of appropriateness for the definition of the type. Typology, as quintessentially epitomized in Nikolaus Pevsner’s book, is essentially a way of categorization. Each category has an origin, and the effort of establishing the definition for that category traces the historical development of that category, as the definition changes through history. However, the consequence of this definition-making only leads to criticism of the kind Pevsner wrote for Frank Lloyd Wright’s Guggenheim Museum:

Sensational it surely is, but it is also about everything a museum should not be. It is a monument, after all, and the spiral ramp which one is forced to descend makes any cross moves impossible, and cross moves are the spice of museum visits. What else needs saying by way of criticism of new museums?<sup>3</sup>

Bernard Tschumi proposes a different point of view for this problem:

Architecture has always been as much about the event that takes place in a space as about the space itself. The Columbia University Rotunda has been a library, it has been used as a banquet hall, it is often the site of university lectures; someday it could fulfill the needs for an athletic facility at the University. What a wonderful swimming pool the Rotunda would be! You may think I’m being facetious, but in today’s world where railway stations become museums and churches become nightclubs, a point is being made: the complete interchangeability of form and function, the loss of traditional, canonic **cause-and-effect relationships** as sanctified by modernism. Function does not follow form, form does not follow function — or fiction for that matter — however, they certainly interact. Diving into this great blue Rotunda pool — a part of the *shock*.<sup>4</sup>

“Railway station” “museum” “church” “nightclub”: they are all types, and Tschumi points out the irrelevance of that categorization. In this sense, “Diving into this great blue Rotunda pool” works as a description of a situation that may shock conceptually but not necessarily as an actual experience.

The event, as referred here, is a substance that exists largely in the temporal dimension with a specific duration, as well as the spatial dimension. Therefore these programmatic components are meant to happen at different time frames. When the religious ceremony is taking place, the nightclub is not. And when a religious ceremony and a nightclub take place at different times span in a same space, then that space will start being defined as “multi-functional” or “flexible”; another generalization of terminology based on the limits of definition.

## SECOND PROBLEM — METAPHOR

This problem of definition is what leads to the application of metaphor in architectural programming. It seems that the origin of that idea all stem from the famous statement by Le Corbusier, “House is a machine for living.” Let’s say that there is a question “What is a house?” then there can be an answer such as “A house is a machine for living.” “A house is a city” “A house is a womb”, etc. These answers all work in a metaphorical manner. It seems that any metaphorical application to the given type of the building (of course, it has to be a known and established type as opposed to the unknown, yet to be established type, such as the one that Sony built in the previous paragraph) is possible, which is exemplified by Hans Hollein’s famous statement “Everything is Architecture” with an image of an aircraft carrier in the deserted barren landscape against the sun-set (1964).

There are many arguments over the nature of metaphor, though I would like only to refer to Nelson Goodman’s summary here for my purpose. He uses an example of “The lake is a sapphire.”

The oddity vanishes upon recognition that a metaphorical application of a term is normally quite different from the literal application. Applied literally, the noun “sapphire” sorts out various things including a certain gem but no lake; applied metaphorically, it sorts out various things including a certain lake but no gem.<sup>5</sup>

In other words, the mechanism of the metaphor essentially relies on the categorization of the given element

with no specificity but the most generically acceptable conditions of the elements. “House is a machine for living” can be understood as an answer to the question “what is a house?” although this necessarily involves the series of definition of “what machine is” and “what living is”, in addition to the argument of the mechanism of how metaphor works.

However, let’s apply the initial Goodman question here. If we are to paraphrase the question to “When is a house a machine for living?” Then the answer to this question can be provided with more specific descriptions, with specific time frame:

1. When the partition opens or closes to change the size of the space; it may be twice a day, once a week, or whatever the frequency and duration may be.
2. When the air conditioning adjusts the temperature automatically; it will be specifically during the cold or hot seasons, or while it really is in operation.
3. When the louver adjusts the sunlight; it will be again at particular time with particular sun angle on a sunny day during the daytime.

Etc.

The machines are conceived for the precise, fundamentally simple (or series of simple, therefore complex) *describable* process of operation.

Can we apply the same mechanism to other examples, such as “house is a womb”? The paraphrasing to “When is a house a womb?” does not even begin the descriptive process.

## THIRD PROBLEM — DIAGRAM

In order for the diagram to exist, there has to be more than two components involved. In architectural terminology, they are from the dialectically related components such as “inside/outside” “public/private” “service/serviced”, etc. to more articulated components such as “entrance” “living room” “waiting area” “lounge”, etc. Therefore, a diagram relies entirely on the definition of each articulated component, which are usually attributed to the spatial conditioning. These spatial terminologies are used to categorize the *relative* characterization of the articulated spaces. They are relative, because the articulation occurs in different degrees of clarity, as we have other terminologies such as “semi-public” or “living/dining room”, etc. The greater the degree of the articulation, the more impossible it

becomes to define, as in the case of “breakfast counter (what about other meals taken at the same place)” or “relaxing area”, etc. In fact, these articulations become somewhat a combination of objects or intended activities and the ambiguous identification of space, such as “bed” “daybed” “reception” “work”, etc. plus “area” “corner” “space” “room”, etc. thus the convoluted invention of “daybed corner”, “reception space”, etc.

Living room, for example, has an inherent definition problem, especially in relationship to “family room” in the same context. “What is a living room?” creates layers of problems in the minds of our daily life. In fact, the accompanying book of “Un-private House” exhibition at Museum of Modern Art in New York, curated by Terence Riley in 1999, uses the word “living area” as well as “bedroom” and “work space”, as the standard index for the showcased different houses.<sup>6</sup> We are also witnessing the symptom these days that the real estate new terminology for the living room is “great room”. Now what is that supposed to mean?

There is an additional way in which programmatic articulation works, and that is to characterize the activities involved, such as “sleeping” “eating” “working”, etc. However, these categorizations are inherently crude, since they require instantly more conditioning to become legitimate for articulation, such as “sleeping for half an hour after the lunch (napping)” or “eating breakfast by oneself”, etc. At the same time, they also involve a particular temporal dimension: “eating breakfast” for either 10 minutes or 2 hours are totally different situations to be articulated separately. That format continues until all the articulated components become quantifiably overwhelming, and there will be another dimension of generalization/categorization all over again. Even in the case of one of the most obvious diagrammatic components, “public”, Glenn Lowry, the director of the Museum of Modern Art in New York, remarks the shortfall of the definition:

“Ten Years ago, for instance, the average visitor to the Museum of Modern Art was female, white and 55 years old, with a household income in excess of \$70,000 a year. Today that visitor is 35, with a household income of less than \$50,000 a year. Males and females are almost evenly represented, and while still predominantly white, the ethnic makeup of the museum’s visitors has grown significantly more diverse.”<sup>7</sup>

This description is analogous to the description of the protagonists in fictions in its specificity. The specificity of the description of the protagonist in museum setting also means that the activity of visiting the museum will

need the same kind of descriptions, such as meeting friends after work in a museum cafe, or shopping in the museum store, etc. beyond the generic diagram of what one is supposed to do at the museum.

## DESCRIPTION AS INFORMATION

Thomas Pavel’s discussion of “Salient Worlds” provides an alternative point of view for the programming. By referring to Aristotle’s Poetics, Pavel remarks “the poet must put forward either propositions true in every alternative of the real world (things possible according to necessity) or propositions true at least in one alternative of the actual world (things possible according to probability).”<sup>8</sup> The critical point here is that this probable world has to be described rather than explained. As obvious in the science fiction, let’s say, that if the writer conceives a planet with three sexes in its society, the resulting situations have to be described in detail in order to make that world exist in the story’s context, rather than to explain why such a planet should exist. The operating mechanism is: “what if a planet has three sexes in its society, then what happens in their daily life?” and how that life is described, which is of course a result of how it is imagined.

We can summarize the shift of the problem of definition in architectural programming to the description of the situation as follows:

from: “What is ....? (definition)” and  
 “Why is ....? (explanation)”  
 to: “What if ....? (hypothesis)” and  
 “Then what .... (description)”

For this purpose, it is important to understand the programmatic components as a set of information rather than pieces of logic. Roman Jakobson summarizes this idea of information related to the idea of “Realism”.

A pupil is asked to solve a problem: “A bird flew out of its cage; how soon will it reach the forest, if it flies at such and such a speed per minute, and the distance between the cage and the forest is such and such?” “What color is the cage?” asks the child.<sup>9</sup>

In the imagined worlds described in literature, all the information given by the description is *real*, although as we can see in Jakobson’s example, certain information relies on a logical coherence (such as the logically correct answer to that bird question) and other infor-

mation provides simply more description (in order to create the sense of reality).

The description in the fictions also works in two ways; let's say that the *scrooge's* wicked physique has everything to do with his personality and conduct in the case of Charles Dickens' "Christmas Story". The visual description of *scrooge* is used as an explanation device for the plot development (he does wicked things). On the other hand, Pavel discusses the description employed by Gustave Flaubert in *Madame Bovary*. 'Her hands, however, were not pretty—not pale enough, perhaps a little rough at the knuckles; and they were too long, without softness of line.' (*Madame Bovary*) This particular description is definitely not designed to explain why she does what she does, and Pavel calls this kind of mechanism of description *realist detour*.<sup>10</sup> It is purely a piece of information in the sense of Jakobson's "realism", which is the way in which the mechanism of descriptive programming needs to be understood.

#### EXERCISE 1 — EXPLANATION/DESCRIPTION

Then how does this descriptive programming work conceptually? Let's use the example of a poem, titled *Breakfast (Déjeuner du matin)* by Jacques Prévert to examine the mechanism of descriptive programming.

He put the coffee	Il a mis le café
In the cup	Dans la tasse
He put the milk	Il a mis le lait
In the cup of coffee	Dans la tasse de café
He put the sugar	Il a mis le sucre
In the café au lait	Dans le café au lait
With the coffee spoon	Avec la petite cuiller
He stirred	Il a tourné
He drank the café au lait	Il a bu le café au lait
And he set down the cup	Et il a reposé la tasse
Without a word to me	Sans me parler
He lit	Il a allumé
A cigarette	Une cigarette
He made smoke rings	Il a fait des ronds
With the smoke	Avec la fumée
He put the ashes	Il a mis les cendres
In the ash-tray	Dans le cendrier
Without a word to me	Sans me parler
Without a look at me	Sans me regarder
He got up	Il s'est levé
He put	Il a mis
His hat upon his head	Son chapeau sur sa tête
He put	Il a mis
his raincoat on	Son manteau de pluie
Because it was raining	Parce qu'il pleuvait
And he left	Et il est parti

In the rain	Sous la pluie
Without a word	Sans une parole
Without a look at me	Sans me regarder
And I took	Et moi j'ai pris
My head in my hand	Ma tête dans ma main
And I cried.	Et j'ai pleuré.

Let's say that the last line "And I cried" is obscured from us. Until the next to last line, we can understand it as a description of a situation. It is a chronological depiction of what seems to have been taking place, observed by "I". If we are to exercise the didactic process of deciphering the situation without knowing the last line, then we can assume the situation to be one of the following:

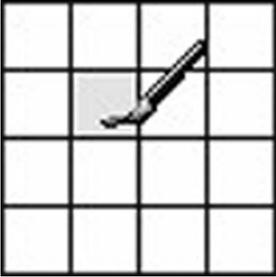
1. "I" and "he" have some kind of relationship, and this scene represents that relationship.
2. "I" and "he" have no relationship, and this is a totally neutral observation by "I" of the scene.
3. "I" and "he" have some kind of relationship, but this scene does not represent that relationship, since this is a totally neutral observation by "I" of the scene.

In the case in which we have to come to the ending of this description, just because it has to end in the last line as an ending (because this is a poem), then it is agreeable to apply the coherence of logic as a strategy. It can be suggested that the repetition of "Without a word to me / Without a look at me" is a way of indicating the grief on the narrator's mind, in which case, "I cried (out of grief)" is the resolution of that logical process. This is how the entire text up to the last line works as an explanation of the last line (1). It represents the idea of the grief by "I".

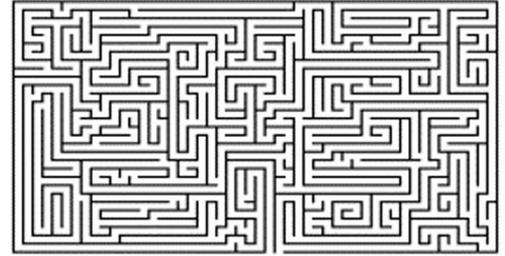
On the other hand, if we are to take the description completely as a neutral set of information, without the effort to deduce the logical sequence (because we don't have to), then the nature of the description becomes entirely different. If we are to put a sentence such as "I laughed" or "I yawned", then what happens is that it simply unfolds to the next set of information to be provided. There will have to be series of the next descriptions that follow. In other words, we do not have to understand the poem/description/information as something that comes to a logical conclusion at all. Rather, the description continues on and on until a substantial enough description of different situations becomes revealed. In the case of the previously mentioned examples such as "shoppers catching a plane" or "diving into the great blue Rotunda pool", conceiving of the programmatic conditioning seems to require this approach of elaborating on the imagined situation.

**EXERCISE 2 — TEMPORAL/SPATIAL**

The description of a situation is inherently tied to the temporal dimension. One situation occurs before or after another situation, and each situation has a specific duration of time. In the case of the Japanese traditional living, the room that is used as a living room during the day would become the bedroom at night with the use of the futon that will be stored away in the morning.

*Colored Grid*

Consider a grid of size 4 x 4 (i.e. sixteen squares), where all squares should get a color. The colored grid should meet the following conditions:  
 4 squares should be colored blue,  
 3 squares should be colored red,  
 3 squares should be colored white,  
 3 squares should be colored green,  
 3 squares should be colored yellow, and  
 no color appears more than once in any horizontal, vertical, or diagonal line.



The solution to a puzzle is not based on a temporal dimension. There is no chronological order to the process of the solution. It can be solved in an undefinable length of time, in fact the examination of the solution can happen in a split second. If there is a length of time involved for the solution, then that length carries no conceptual importance. On the other hand, the solution to a maze does require a conceptual length of time, since the solution can only be traced in the chronological sequence of time. Every point of the solution is not interchangeable. In this regard, we can characterize solving the puzzle as a spatial process and solving the maze a temporal process.

In "Harry Potter" by J. K. Rowling, a new game called "Quidditch" is invented and described. The interesting thing about it is that the author had to describe the game in two different formats; one is the description of the rules of the game as Harry Potter himself had to learn as a beginner, the other is the description of the actual game played by two teams staging the exciting situations evolving from the interactions of the rules and the performance itself. "Quidditch" and other sports have a set of rules; one part of the rules is a spatial conditioning, such as the size of the court, the number of the players, the height of the basket, etc. and the other part is an operational conditioning including how long the game will take place, etc. It is a combination of the spatial and temporal conditioning. If we are to invent a new game, we have to conceive these two sets of information, i.e. the rules and the actual game. And that process is grounded on the difference between puzzle and maze; rule (spatial conditioning) through spatial process (solving the puzzle), and performance (temporal conditioning) through temporal process (solving the maze). We can argue that

Diagrammatically speaking, this can be summarized as "flexible", though that is not what our interest is here. It is the nature of distinction between temporal and spatial point of view in the mechanism of description.

In order to incorporate this point of view, let's examine the mechanism of two kinds of games we play. One is a puzzle and the other is a maze, as they are generally categorized.

the nature of the descriptive programming parallels this idea of inventing rules and following through with the description of the performance. Therefore, it involves not only the spatial conditioning as typified in the conventional programmatic ideas but also the temporal dimension which brings out the specific situations more closely related to our perception of reality. And that reality does not always require the definition to be relevant.

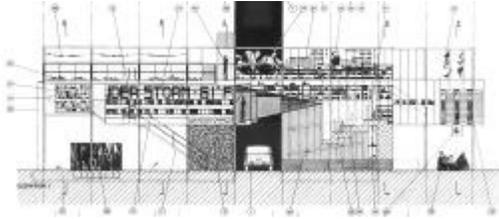
**CONCLUSION AS BEGINNING**

The preceding discussion does not attempt to deduce a conceptual conclusion. The objective is to propose an alternative point of view to three prevalent ideas of programming; Typology, Diagram, and Metaphor, as developed through Modernism. Academically speaking, this alternative point of view may mean that architectural education, especially in the design studio situations, might employ the writing of descriptive text as a viable method of the programming of projects. This may also clarify the difficulties we are witnessing in the discussion of architectural programs as mentioned in the example of shoppers in airports and socializing in museums, etc. In a seminar I teach, that is exactly what the students attempt to do; i.e. programming as a creative writing. This technique also involves a series of exercises, a few of which have been mentioned previously. However, it should be also noted that the discussions in the seminar are necessarily influenced by the study of language and literature, and revolve around many of the same issues that are being discussed in those discourses.

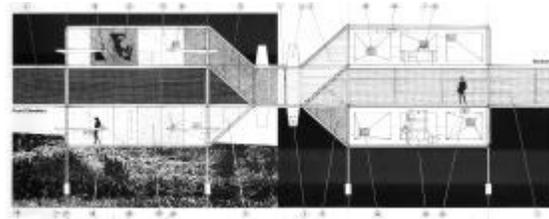
I have worked on a series of theoretical project, titled "House of PLOT(s) — #1, #2, #3", which employ directly the idea of descriptive text as a programmatic device to conceive a living situation (house). I will not elaborate on these projects in this paper. However, imagining the specific situations without being concerned about the logical coherence is what became the most interesting aspect in the process of developing these projects, and

not the conceptual explanation of ideas in each project, per se. It is the process of programmatic conditioning and description of the resulting situations.

This mechanism of descriptive programming broaches the possibility of accommodating the immediate symptoms of our culture, without the delay of coherent explanation.



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## NOTES

- <sup>1</sup> Nelson Goodman, "When is Art?", *Ways of Worldmaking* (Hackett Publishing, 1978).
- <sup>2</sup> John Searle, "The Logical Status of Fictional Discourse", *Expression and Meaning* (Cambridge University Press, 1979).
- <sup>3</sup> Nikolaus Pevsner, *A History of Building Types* (Princeton University Press, 1979).
- <sup>4</sup> Bernard Tschumi, *Architecture and Disjunction* (MIT Press, 1996).
- <sup>5</sup> Nelson Goodman "Metaphor as Moonlighting", *Of Mind and Other Matters* (Harvard University Press, 1984).

- <sup>6</sup> Terence Riley, *The Un-private House* (The Museum of Modern Art, New York, 1999).
- <sup>7</sup> Glenn Lowry, *The State of the Art Museum, Ever Changing* (New York Times January 10, 1999).
- <sup>8</sup> Thomas Pavel, *Fictional Worlds* (Harvard University Press, 1986).
- <sup>9</sup> Roman Jakobson "Realism", *Language in Literature* (Belknap Press of Harvard University Press, 1987).
- <sup>10</sup> Thomas Pavel, "On Conventionalism in Poetics", *The Feud of Language* (Basil Blackwell, 1989).
- <sup>11</sup> Taeg Nishimoto, *PLOT House* (GA Houses no.37, 1993).
- <sup>12</sup> Taeg Nishimoto, *PLOT House(s)* (GA Houses no.45, 1995).