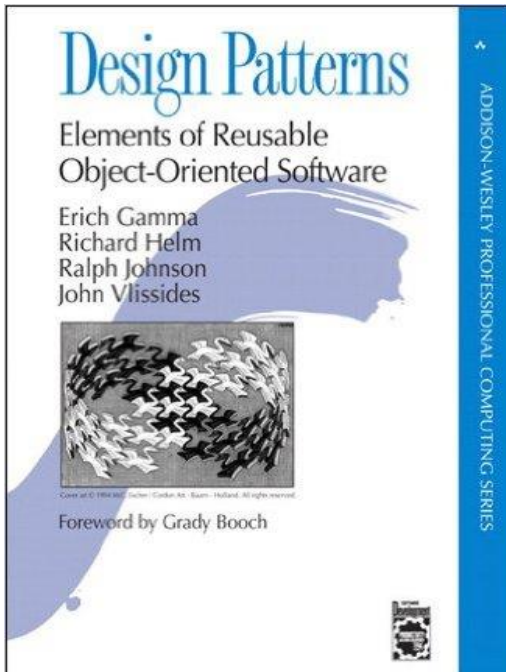
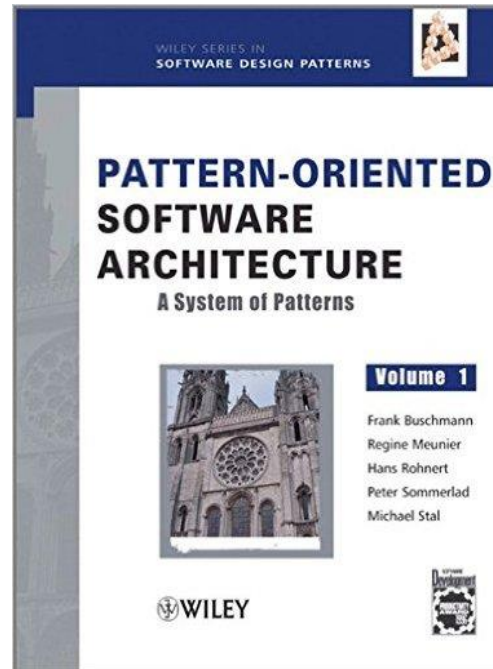


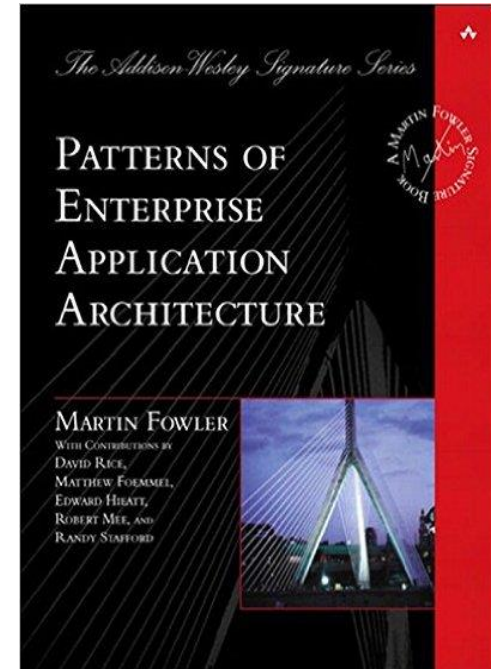
Software patterns are everywhere...



DP

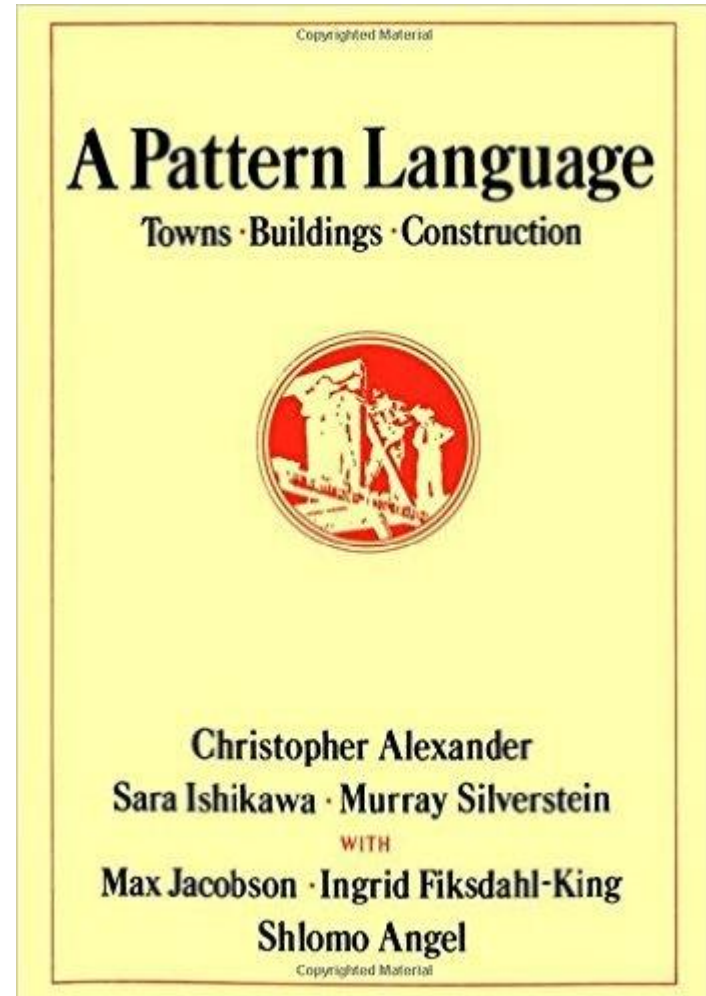
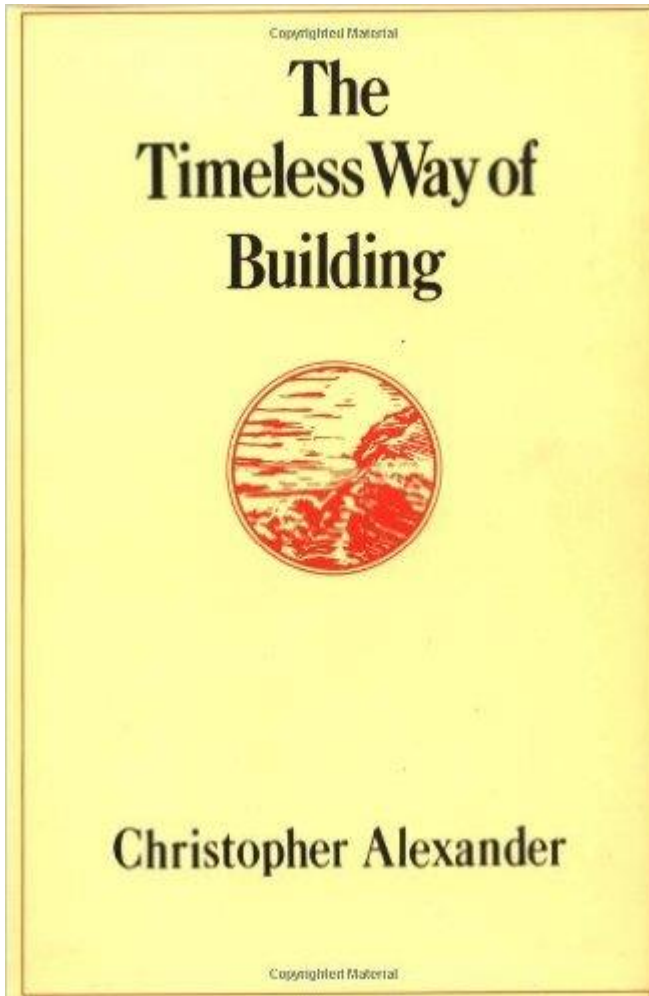


POSA I



and many, many more!

They are all influenced by ...



What is a pattern?

Each pattern describes a *problem* which occurs *over and over again* in our *environment*, and then describes the *core of the solution* to that problem, in such a way that you can use this solution a million times over, without doing it the same way twice.

C. Alexander, *A Pattern Language*, 1977.

Patterns

- Patterns of events
- Patterns of space
- Pattern of relationships
 - name of entities in a pattern is just a placeholder for pattern at a more detailed level.
 - You stop going further when it stops being fruitful

107 WINGS OF LIGHT **

- ***Problem***

Modern buildings are often shaped with no concern for natural light - they depend almost entirely on artificial light. But buildings which displace natural light as the major source of illumination are not fit places to spend the day.

- ***Solution***

Arrange each building so that it breaks down into wings which correspond, approximately, to the most important natural social groups within the building. Make each wing ***long and as narrow*** as you can - never more than 25 feet wide.

159 LIGHT ON TWO SIDES OF EVERY ROOM **



Context

*. . . This pattern now completes the work of **WINGS OF LIGHT (107)**, by placing each individual room exactly where it needs to be to get the light. It forms the exact line of the building edge, according to the position of these individual rooms. The next pattern starts to shape the edge.*

Problem – *misfits* experienced

- When they have a choice, people will always gravitate to those rooms which have light on two sides, and leave the rooms which are lit only from one side unused and empty.



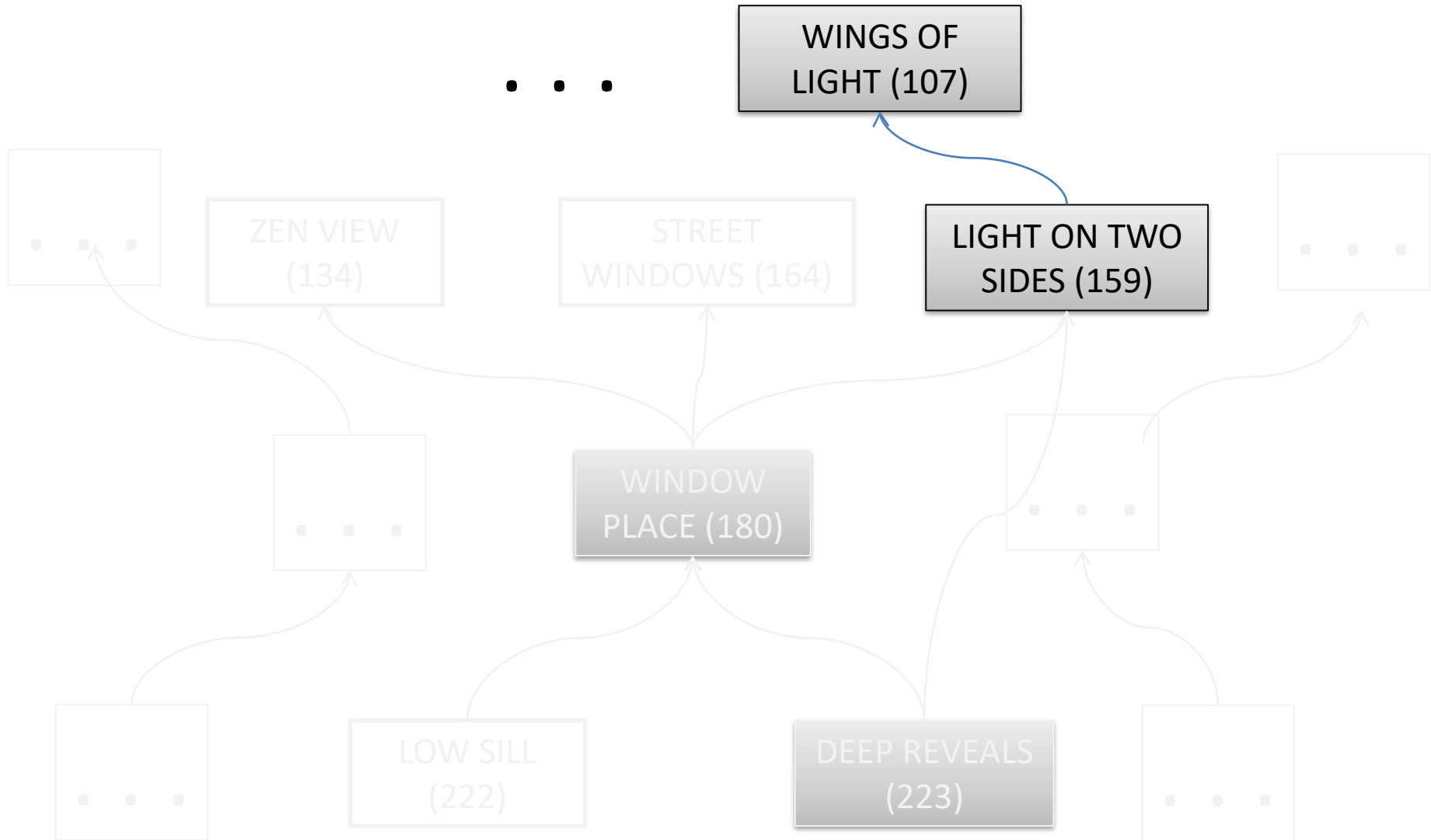
Forces

The ***difference in brightness*** between the bright window and other parts of the room.

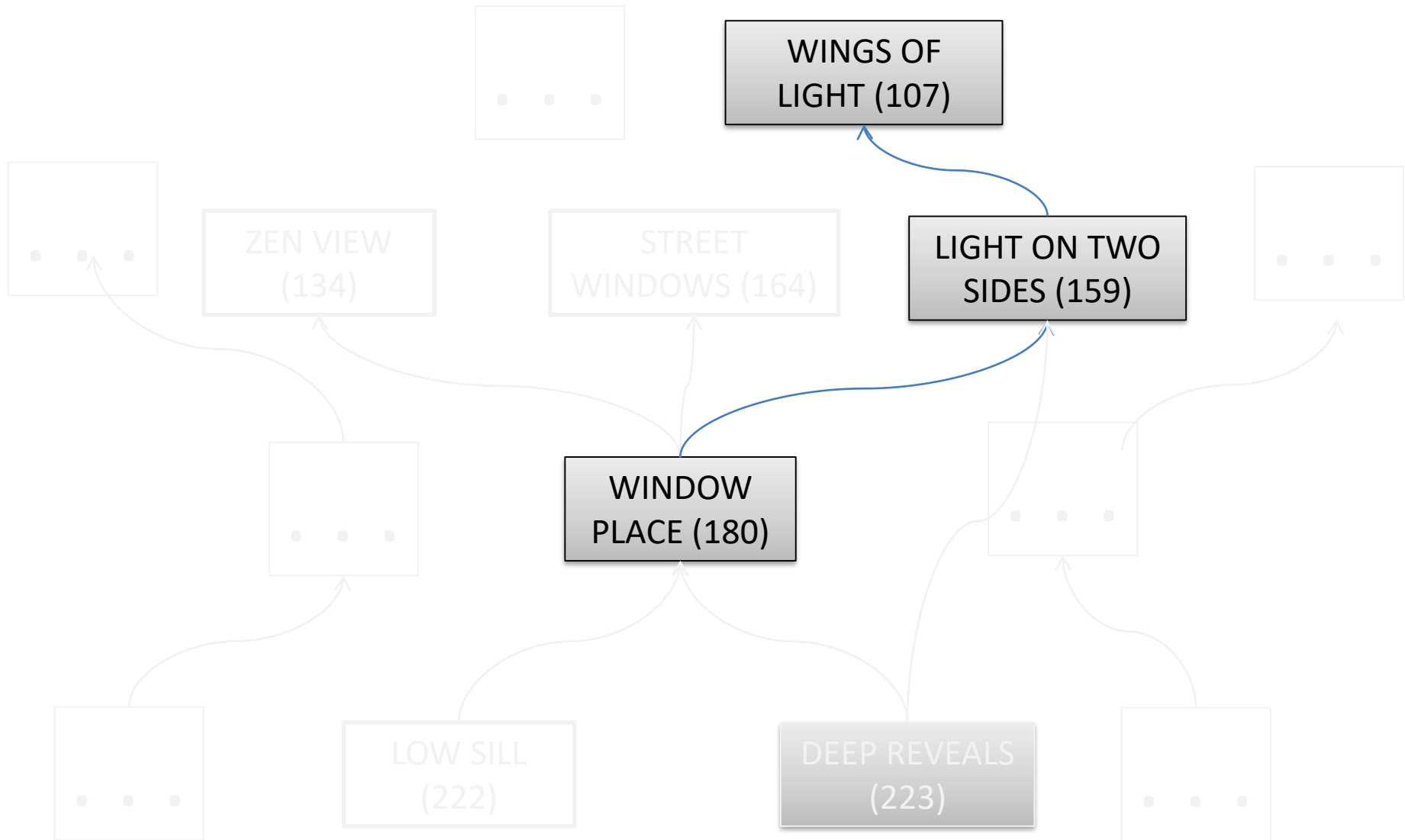
Solution

- Locate each room so that it has ***outdoor space*** outside it on at least two sides, and then place windows in these outdoor walls so that ***natural light*** falls into every room from ***more than one direction***.

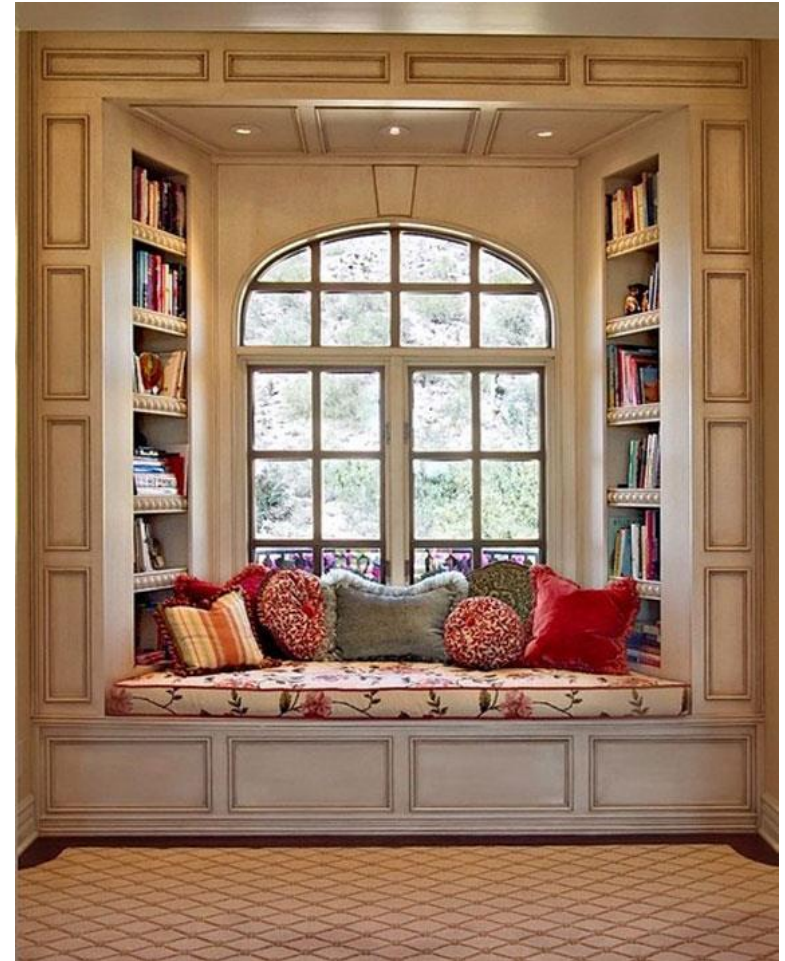
Patterns



Patterns of relationships



180 WINDOW PLACE**



Source: [http://www.impressiveinteriordesign.com/a-collection-of-nook-](http://www.impressiveinteriordesign.com/a-collection-of-nook-window-seat-design-ideas/)

Context

... this pattern helps ***complete*** the arrangement of the windows given by ENTRANCE ROOM (130), ZEN VIEW (134), LIGHT ON TWO SIDES OF EVERY ROOM (159), STREET WINDOWS (164). According to this pattern, at least one of the windows in each room needs to be shaped in such a way as to increase its usefulness as a space.

Problem – *misfits* experienced

Everybody loves window seats, bay windows, and big windows with low sills and comfortable chairs drawn up to them.

... A room which does not have a place like this ***seldom allows you to feel fully comfortable or perfectly at ease***. Indeed, a room without a window place may keep you in ***a state of perpetual unresolved conflict and tension-***slight, perhaps, but definite.

Forces behind the problem

If a room contains no window which is a “place,” a person in the room will be torn between two forces:

1. He wants to sit down and be comfortable.
2. He is drawn toward the light.

... if the comfortable places ... are away from the windows, there is no way of overcoming this conflict.

Solution - Empirical evidence

All of the following can function as “places”:

- bay windows,
- window seats,
- a low window sill where there is an obvious position for a comfortable armchair, and
- deep alcoves with windows all around them.

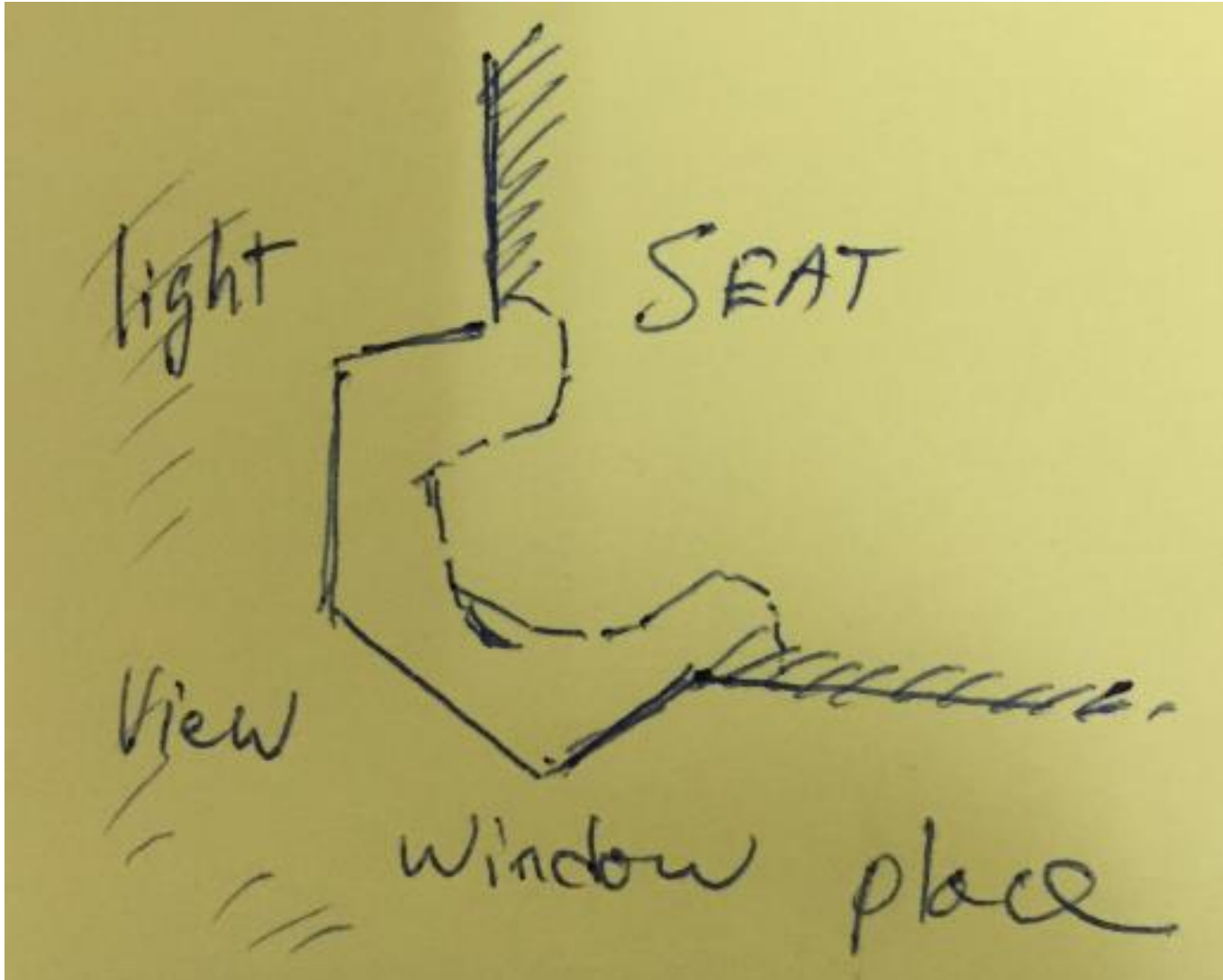
Solution

... In principle, any window with a reasonably pleasant view can be a window place, provided that it is taken seriously as a space, a volume, not merely treated as a hole in the wall.

Therefore:

In every room where you spend any length of time during the day, make at least one window into a “window place.”

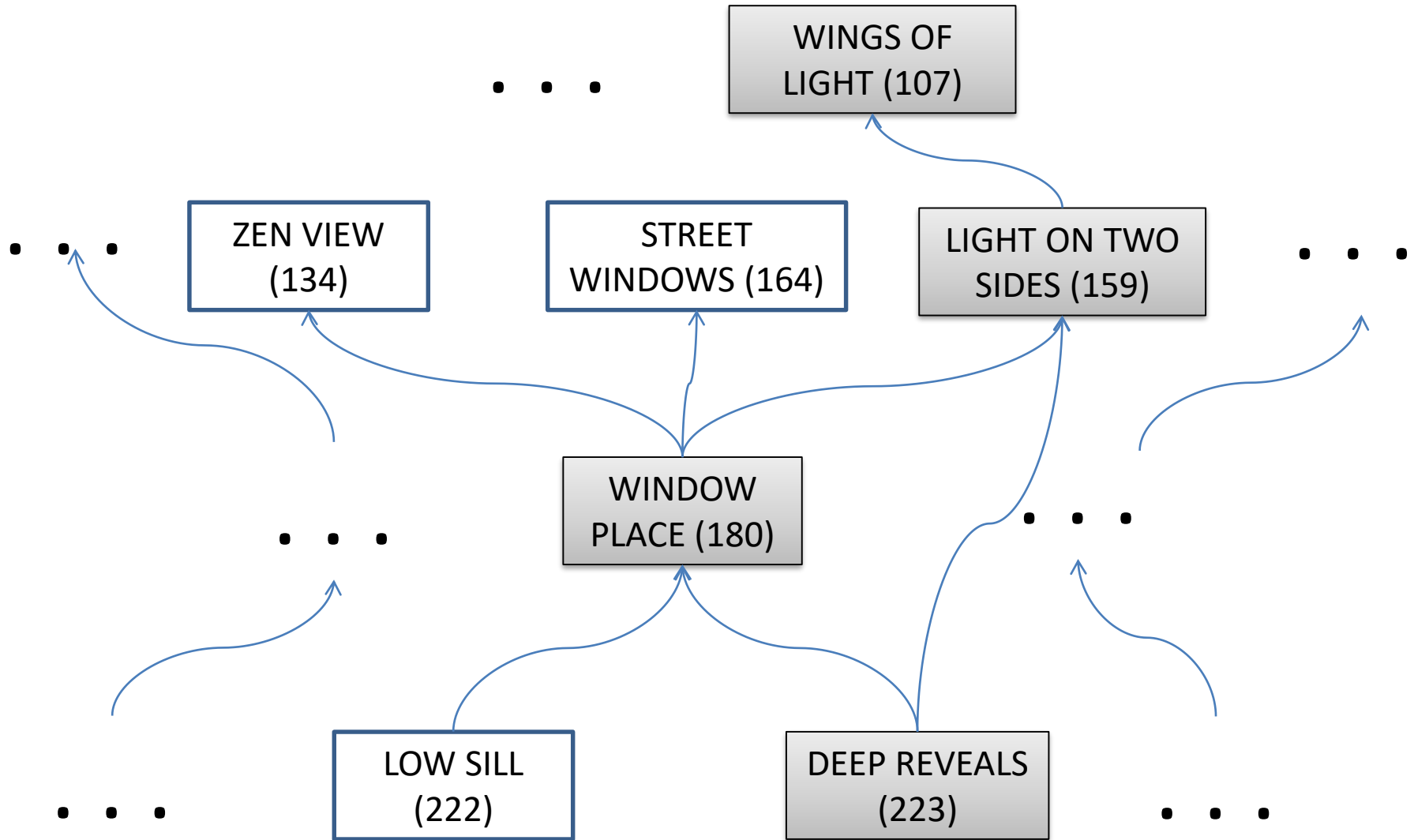
Solution: Diagram



Supporting patterns

Make it low and self-contained if there is room for that – ALCOVES (179); keep the sill low – LOW SILL (222); ... set the window deep into the wall to soften light around the edges – DEEP REVEALS (223)...

Patterns do not exist in isolation



completes

A pattern format after Alexander

- Name: to identify pattern in a pattern language (with Picture)
- Context: Where is the pattern applicable? What larger patterns does the pattern help complete?
- Problem: misfits experienced and forces behind
- Solution with empirical instances
- Consequences (resulting context)
- Supporting patterns: what patterns embellish it?

223 Deep Reveals

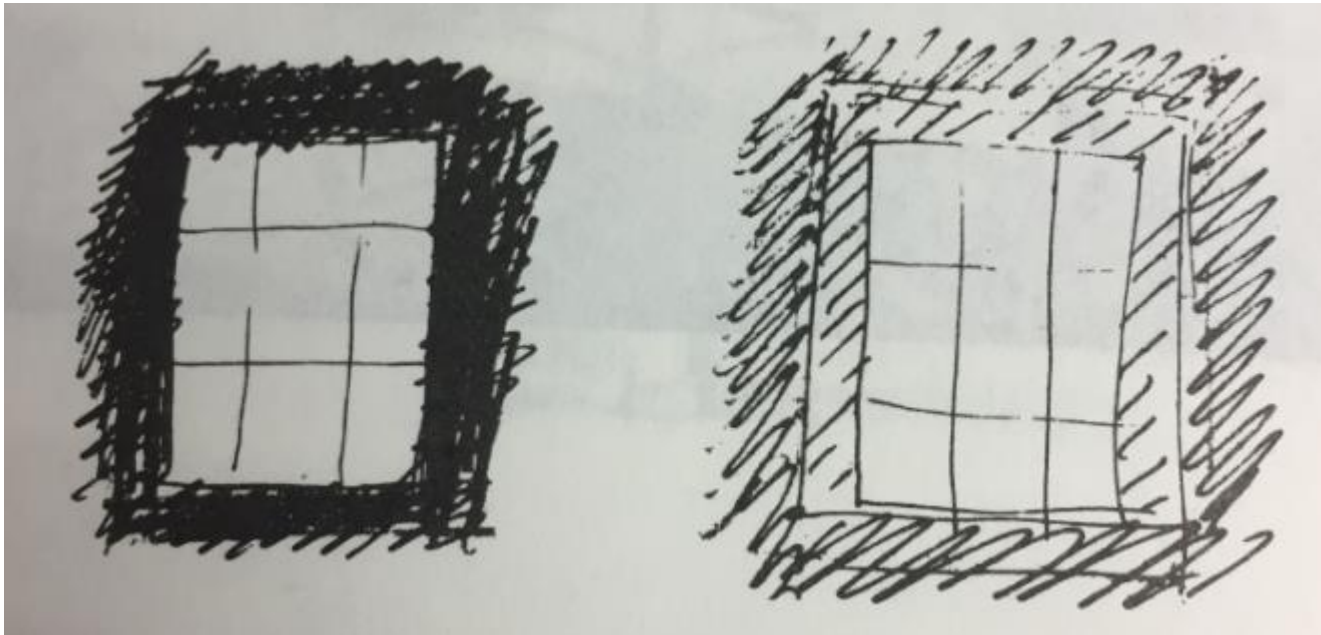


Context

... this pattern helps complete the work of LIGHTS ON TWO SIDES OF EVERY ROOM (159), by going even further to reduce glare; and it helps to shape the FRAMES AS THICKEN EDGES (225).

Problem – *misfits* experienced

Windows with a sharp edge where the frame meets the wall create harsh, blinding glare, and make the rooms they serve uncomfortable.

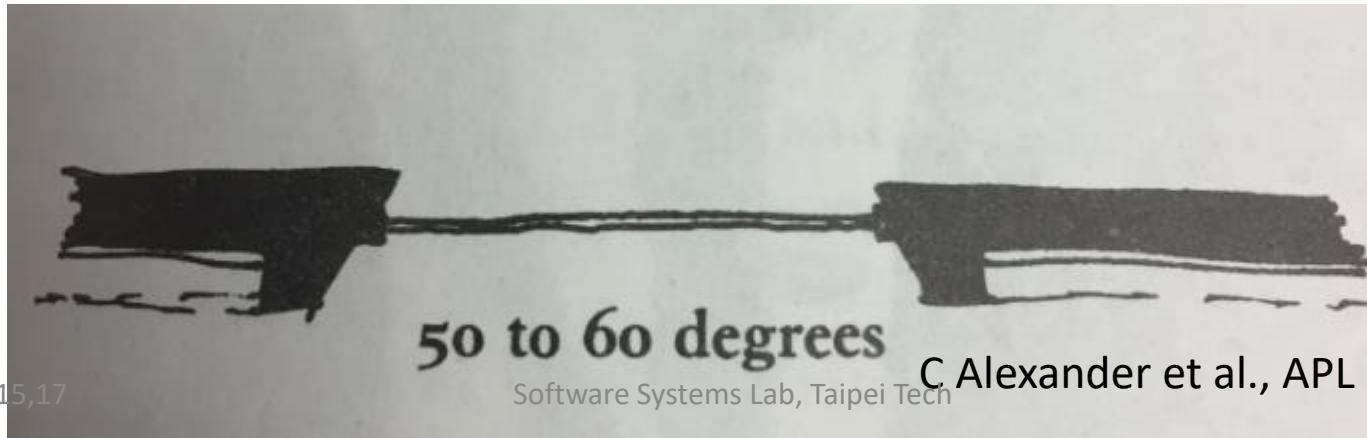


Forces

The ***difference in brightness*** between the bright window and the dark wall around it.

Solution

Make the window frame a deep, splayed edge:
about a foot wide and splayed at about 50 to 60 degrees to the plane of the window, so that the gentle gradient of daylight gives a smooth transition between the light of the window and the dark of the inner wall.



Pattern Language

- In APL, there are 253 patterns from patterns for *towns*, to patterns for *buildings*, and to patterns for *construction*
- Pattern languages are generative
 - English
 - APL for towns, buildings, and construction

Readings

- TWB, chapters 4-5, 10-12
- DDD, context map, bounded context, aggregate, etc.