



**ACADEMY OF MUSIC AND DRAMA**

## **MORPHING PATTERNS, BUILDING MUSIC**

A way forward from minimalism in music writing

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## ABSTRACT

Key words: minimalism, patterns, modules, composition process

This project outlines my composition process with reference to musical minimalism, and uses it as a starting point to explore the possibilities how this composition process can move forward in terms of more creative means of processing the material, as well as how it can interact with the context of composition and potential means of creative presentation, thus creating a unique and personal creative style that reflects updated contexts of contemporary music composition.

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## Introduction

Minimalism in music has developed for more than a half-century under the development of composers such as La Monte Young, Steve Reich, Philip Glass, John Adams, and many more. It has grown from an avant-garde niche to an acknowledged force in contemporary Western art music.

For minimalism to go forward, I would like to take the opportunity of this independent project to formulate a modular system of composition based on the concept of pattern language.

## Part 1: Introduction to minimalism

### Minimalism and why does it matter

Philip Glass credits the music of Moondog (Louis Thomas Hardin) in the 1940s and 1950s, which involves counterpoint development over steady pulses, as a predecessor of what became known as minimal music (Glass 2008). Dennis Johnson, Terry Riley, Steve Reich and Philip Glass started music minimalism as a distinct musical idiom, in part inspired by the possibilities of technology such as tape loops.

Gradually, the hallmark features of minimalist music, such as additive, juxtaposition and phasing processes, developed as composers were exposed to different influences: Philip Glass by his study of Indian Music with Ravi Shankar, and Steve Reich by his study of Ghanaian drumming. Minimalist music over the years has also been influenced by Baroque music, Gregorian chant, church bells (in the case of Arvo Pärt), and others.

### Significance

- A reconciliation with earlier tonal traditions, instead of a complete break
- Challenge to the “traditional” linear time concept in music
- Re-thinking of the basic elements of music
- Connection with parallel movements in architecture and arts
- Re-connection of contemporary “classical”/serious music to the general public
- The minimalist philosophy and its significance in the context of sustainable development. “Less is more” is an appropriate summary of the attitude to use less energy to accomplish more aims, ensuring the sustainable use of resources for present and future generations. In music, it can be applied to mean to write less material but achieve the same, or even more intense, emotional power.

Music minimalism being a half-century old movement, there is a good case for contemporary “classical”/serious music to move forward from minimalism by building on, and extending, its elements and ideas. In the next part, I will discuss modules’ and patterns’ role in building music, and use them to demonstrate the possibility of a forward form of minimalist music.

## Part 2: Modules and Patterns

### What are modules?

Cambridge Dictionary gives the definition of the word module as “one of a set of separate parts that, when combined, form a complete whole”<sup>1</sup>.

Modules are often standardised parts which can be assembled in multiple ways to form a larger object. We can see the use of modules in a variety of designs, among them the modular construction

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<sup>1</sup> Extracted from Cambridge Dictionary online: <https://dictionary.cambridge.org/dictionary/english/module>

method to construct buildings out of prefabricated units, and also the famous IKEA products which the purchaser can assemble at ease.

The usage of modules provides advantages such as efficiency of material usage, less effort needed for fine-tuning of product, and flexibility in adapting to different context, environment and circumstances of usage.

“Modular Music” was discussed in Saunders (2008). In that text, the term was used to specifically denote works of music which are organised in distinct modules, these modules not being on a linear time structure, but instead have different interrelations with respect to time; such relations may be in the form of choice, with (for example) the performer being able to rearrange these modules within the time-space of the performance, or, after playing each module, being able to choose one module out of two (Saunders 2008). Saunders cited Earle Brown’s *25 Pages* (1953) as an example, which (among other instructions) the performer is free to play the 25 pages in any sequence.

It must be emphasised that, while time is a good idea as an organiser of modules, it is obviously not the only option; motifs, instrumentation, texture, dynamics, stage space, etc. can all be candidates to the organisation of modules.



Figure 1: A building constructed using pre-fabricated units<sup>2</sup>.

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<sup>2</sup> Photo extracted from Construction Junkie (2017), *World’s First Modular Building Code Developed in Australia*, <https://www.constructionjunkie.com/blog/2017/10/15/worlds-first-modular-building-code-developed-in-australia>

# BILLY

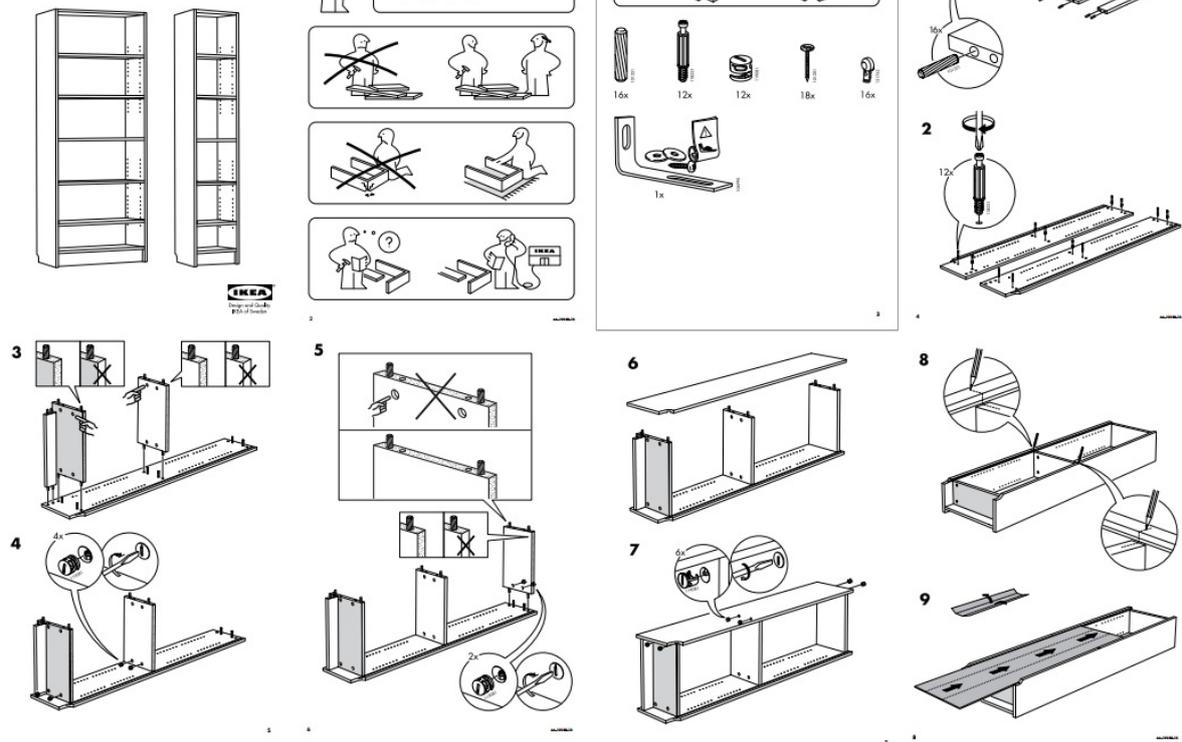


Figure 2: Assembly instructions for the BILLY bookshelf, marketed and sold by IKEA<sup>3</sup>.

What are patterns?

Like modules, patterns are often repeatable units that together form a larger whole. We focus on three senses of patterns:

Metaphysical sense

As explored by Psillos (2014), a pattern is “a network of stable similarities and differences among various entities”, is repeatable and recurs, the property of repeatability being essential, for example each and every raven being black, each and every planet having an elliptical orbit. The unity of a natural pattern characterises regularity which represents a law of nature. Pattern is the form of the regularity. Patterns can be nested (i.e. included in other patterns) and can share form with other patterns (Psillos 2014).

Aesthetical sense

Patterns as repeating geometrical elements that occur in nature or manmade constructions, e.g. symmetry, spirals, waves, various shapes, motifs that include specific geometrical elements etc.

Patterns in problem solving

Patterns are solutions or “good practices” to address a specific problem. As such, they are reusable. A list of interrelated patterns forms a “pattern language” that serve a particular field and/or community with a common set of interests, problems and goals.

<sup>3</sup> Image extracted from IKEA (2008), *BILLY Bookcase*, [https://www.ikea.com/assembly\\_instructions/billy-bookcase--202-cm\\_\\_JXQ13\\_PUB.PDF](https://www.ikea.com/assembly_instructions/billy-bookcase--202-cm__JXQ13_PUB.PDF)

Christopher Alexander initiated the pattern language concept in architecture, each pattern including some design elements that are observed to address the problem that the pattern aims to solve, thus being a reusable solution to address a design problem (Alexander, Ishikawa and Silverstein 1977). However, the most successful adaptation of the concept is found in field of computer programming, vis-à-vis the “Gang of Four” book (Gamma, et al. 1994). The concept is also applied to the field of pedagogy, where good practices in teaching are summarised in various patterns (Joseph Bergin 2012).

The treatment of patterns in music, as patterns in itself and as a composition practice Steve Reich, Philip Glass, William Basinski, Julius Eastman, Arvo Pärt, Morton Feldman... Each of these composers can be seen as having a pattern language of composition practice for themselves, and each of the patterns in the language represents a way of treatment of smaller patterns (motifs/elements and their combinations).

Their “pattern languages” are not only as a collection of patterns, but also how the patterns are put together, processed, and presented, i.e. compositional practice.

Composition pattern language can evolve over time, as seen in Steve Reich’s evolution of works:

1. Tape loops; social commentary: *It’s Gonna Rain* (1965), *Come Out* (1966)
2. Phasing: *Piano Phase* (1967), *Clapping Music* (1972)
3. Juxtaposition of texture and timbre; additive development: *Music for 18 Musicians* (1976)
4. Jewish heritage: *Tehillim* (1981)

Note that a new pattern enriches the pattern language, not replacing it.

These patterns qualify as such since they are repeatable and recurring regularities that are specific to a composer’s corpus, so we can speak of pattern languages as possible basis of compositional practice.



Figure 3: Excerpt from section V of Reich’s *Music for 18 Musicians*. Score published by Boosey & Hawkes.

Patterns and pattern language in my works

I will also demonstrate the use of patterns and modules in formation of a pattern language in my works.

1. *Dance of Sai Kung* (2<sup>nd</sup> movement from *Symphony No. 2*, 2012): pentatonism, ostinato bassline, ensemble-based orchestration (the last being a pattern borrowed from Bruckner’s symphonies); modules distinguished by main melody and bassline
2. *Orchestral Piece for a New Era* (2014): addition and juxtaposition in layers; modules distinguished by material nature (melody/rhythm/bassline)
3. *Round The Island* (2017): juxtaposition, repetition as motion; modules as autonomous and indefinitely repeatable units

Flute

Violin

Piano

$\text{♩} = 108$

Figure 4: Opening of Round The Island. Each bar is to be played for around one minute, and each player can decide when to move on to the next bar. The music is played simultaneously to a forward-view video of cycling.

### Elements of a design pattern

Elements of a design pattern commonly include the following (Kunert 2009):

1. Pattern name
2. Pattern description
3. Problem Statement
4. When to use
5. Solution to the problem and its rationale
6. Examples
7. Any comments made by members of the design team
8. Optional: style guide, usability research, related patterns, similar alternatives, source code

## Part 3: Development of a forward-looking composition practice

### Personal context, identity, and the composition model

- What makes who I am? What gives rise to personal identity?
- A model of the Self's interaction with the Other
- A model of music composition in relation to the Self and the Other

### Social context and connection

#### Social context

Some issues relevant to 2018/2019:

- Global vs local
- Sustainable development
- Clash of culture systems worldwide
- Individual vs social and their boundaries

#### Connection to other fields

Arts, geography, sports, management, urban planning, interpersonal interaction...

Development of a pattern language as compositional practice

What are the goals of composition? What are the “design problems”?

With reference to the previous discussion on personal and social context.

Identification of patterns to be used in a proposed compositional pattern language

What patterns can be identified from my music up to now? What can be taken from the discussion on the minimalist masters, their works and their “pattern languages”? How these patterns interact with the personal and social context? What patterns can be the foundation of the to-be-proposed pattern language? (With an emphasis that the pattern language is of a personal nature)

A rough proposal of pattern categories may be as follows:

- Conception of a music work
  - Music, time and space
  - Context, influence and intention
- Writing the music
  - Genre and structure
  - Instrumentation and timbre
  - Melodic patterns and motifs
  - Processing of basic patterns
    - Rhythmic processing
    - Repetition processing
    - Juxtaposition processing
    - Differentiation
  - Effective communication in a music score
- Realising the music
  - Forms of presentation and documentation
    - Live (concert etc.)
    - Non-live (recordings etc.)
    - Non-sonic (scores etc.)
    - Hybrid/Multimedia
  - Roles in the dissemination of music
    - Concert presenters
    - Publicity
    - Record studio
    - Publication platforms
    - Business model and sources of income
- A unified and coherent style (a “brand image” that spans the conception, writing and realisation of music, and which communicates with personal and social context)

## Part 4: Application of the proposed pattern language as a personal composition practice

Here, a selected portfolio of works and music projects is presented, showing how the above-proposed pattern language is applied as my composition practice.

THIS MOVEMENT, PLAY 10 TIMES FOR EACH BAR

L. RICE | First 10 Bars

Instrumentation: Piccolo, Flute 1, Flute 2, Oboe 1, Oboe 2, Clarinet in Bb 1, Clarinet in Bb 2, Bassoon 1, Bassoon 2, Horn in F 1, Horn in F 2, Horn in F 3, Horn in F 4, Trumpet in Bb 1, Trumpet in Bb 2, Trumpet in Bb 3, Trombone 1, Trombone 2, Trombone 3, Tuba, Timpani, Bongo Drums, Conga Drums, Quin Tambourine, Violin I, Violin II, Viola, Cello, Double Bass.

Figure 5: Opening of Tropical Landscapes (2018) for orchestra. Each bar is to be played 10 times. The theme of the piece is Philippine culture. Demonstrated here are the patterns of layer juxtaposition and role division of instrumentation, as well as the bar as the modular unit that can in theory be extended indefinitely (i.e. not necessarily 10 times).

Interactive activities to demonstrate this system of composition

1. Seminar to introduce and discuss this system of composition
2. Pattern language workshop, where participants decide on a pattern language and use it to build a music work
3. Concert, where the results of the workshop are presented, along with a selection from my abovementioned portfolio

Deliverables

1. Thesis
2. Wiki of pattern language
3. Portfolio



*Figure 6: A charrette session, used to produce a community urban planning design<sup>4</sup>. Similar sessions may be used to create a community pattern language.*

## Epilogue

The “pattern language”, combined with the modular concept, creates a composition practice which simplifies, conceptualises and integrates music creation, while creating a powerful, personal musical language that looks forward and interacts with personal and social context (that is to say the “here and now”), thus carrying the minimalist music tradition forward with continuing relevance to the “here and now”.

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<sup>4</sup> Photo extracted from Downtown Tucsonian Partnership, <https://www.downtowntucson.org/planning-charrette/>

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