Music Patterns

First Edition
Last updated: 8/15/2018

Contents

Introduction

The world of software development birthed an approach for identifying and cataloguing patterns which has proliferated - design patterns, architecture patterns, database patterns, analysis patterns, anti-patterns, etc. This started with a book *Design Patterns*, written by a group of technologists colloquially known as the Gang of Four. In the tech world, patterns are identified solutions (ideally generic) to recurring problems of a particular type. Rather than recreate the wheel every time software developers need to solve a particular type of problem, they create a vocabulary around those patterns such that someone can say a single word and everyone is immediately on the same page. How these patterns are catalogued is also important - look at the Singleton pattern on Wikipedia as an example. This tells people how to identify the applicable problems, how to use this pattern to solve those problems, etc.

The effect of this proliferation of patterns has been to transform the world of software development from being mostly artisanal in nature, to having a growing set of standards and best practices that can be intentionally and consistently applied.

I suspect many people think of music and musicality in mystical or wishy-washy terms, but by using this same concept of patterns, we can identify and catalogue a whole class of music patterns related to piano practice, technique, musicality, composition, etc. My

childhood solfege and piano teacher, Mademoiselle Yvonne Combe, studied at the Paris Conservatory when four famous French composers were alive in the early 1900s. She founded The French School of Music in Plainfield, NJ in 1927 and many alumni taught by Mlle. Combe went on to attend top-notch conservatories. This is because her solfege and piano practice methodologies were comprehensive and deadly effective. In his book *Fundamentals of Piano Practice*, my father coined the term "continuity rule" to describe the core mindset around how those at French School practice efficiently, and *Music Patterns* is a first step in attempting to codify French School's methodology around musicality and other music categories, including related life-hacking patterns, into a music pattern library.

Music Pattern Template

We've borrowed and adapted the format for how music patterns are documented:

- Pattern Name (required) - a unique name

- Category (required) - applicable music or life-hacking category. Note that in this pattern library, patterns are already broken down by category, so this field is eliminated. Add this field in when the pattern description is used within a standalone reference.

- Specificity (required) - highly generic, generic, specific (ideally, more generic patterns can solve a larger class of

problems)

- Example (required) - specific musical reference

- General Problem (required) - description of the problem

- Usage (required) - how to apply the pattern to solve this
  problem

- Benefits (optional) - list any aspects that are not obvious

- Consequences (optional) - list any consequences from using
  this pattern, and how to account for them

- Other Contexts (optional) - generic patterns likely have a
  number of different contexts in which they can be applied

- See Also (optional) - list related music patterns. Should
  these patterns be put into a searchable database, this field
  will contain tags which will allow people to search for, for
  example, all music patterns related to antifragility.

- Notes (optional) - random applicable notes

- Contributor (required) - the subject matter is so vast, that
  this will likely transition into a crowdsource effort. Also,
  include the name of the contributor and the date this
  pattern was documented. While many of these methods
  were documented in previous years, for example, in
  Fundamentals of Piano Practice, 2018 represents the
  baseline year for when these methods were documented in
  music pattern form.

Music Anti-Pattern Template

As identified in the tech world, the difference between a pattern and an anti-pattern is that an anti-pattern has two solutions - one that generates a negative consequence and the correct solution which generates a positive consequence.

Refactoring is another key concept that comes from the tech world, courtesy of Martin Fowler. When doing software development, a best practice is first to solve the problem and get something working, without any thought to how clean or efficient the code is. Once the solution has been coded correctly, then focus on how to restructure this code without changing its external behavior. This is much more efficient and less error-prone than trying to do everything at once. This concept comes into play with anti-patterns.

- Anti-Pattern Name (required) - a unique name

- Category (required) - applicable music or life-hacking category. Add this field in when the pattern description is used within a standalone reference.

- Refactored Solution Name - the resulting music pattern that produces a positive consequence, unlike the anti-pattern

- Root Causes (required)

- General Form (required) - description of the anti-pattern

- Symptoms and Consequences (required)

- Known Exceptions (optional)

- Refactored Solution (required)

- Example (required)

- Related Solutions (optional)

- See Also (optional) - list related music patterns and anti-patterns

- Notes (optional) - random applicable notes

- Contributor (required)

Music Pattern and Anti-Pattern Categories

- Piano Practice

- Technique

- Musicality

- Solfege

- Compositional

- Performance

Related Life-Hacking Categories

- Learning

- Teaching

- Preservation

- Mindset

As mentioned in the tech world, patterns are not created or invented, they are discovered and uncovered. As you read through this pattern library, do not be surprised to find that, by hook or by crook, or through sheer desperation, you yourself have stumbled on a number of these patterns.

It's possible at some point this will split into multiple books, each encompassing a single category. I have no idea where all of this will lead, but it could ultimately represent decades if not generations of work.

Pattern Template

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Anti-Pattern Template

Category: TBD

Refactored Solution Name: TBD

Root Causes: TBD

General Form: TBD

Symptoms and Consequences:

TBD

Known Exceptions:

TBD

Refactored Solution:

TBD

Example:

TBD

Related Solutions:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Piano Practice Patterns

These patterns address how to practice efficiently. Also refer to *Fundamentals of Piano Practice* for more information.

Tackle the Hardest First

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Hands Separate

Specificity: Extremely generic

Example: All music

General Problem: A piece of music is difficult to learn and play.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: Continuity Rule

Contributor: C. C. Chang 2018

Continuity Rule

Specificity: Highly generic

Example: All music

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: C. C. Chang 2018

Scaffolding

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Ratchet Up Quickly

Specificity: TBD

Example: TBD

General Problem: Do not learn the notes for an entire piece before working on musicality. By simplifying piano practice with practicing hands alone first, repeated practice includes both the notes and musicality.

Usage:

TBD

Benefits:

Minimize amount of unlearning needed.

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Got It, Forgot It

Category: TBD

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Consistent Fingering

Category: TBD

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: Continuity Rule

Contributor: Eileen Sauer 2018

Cold Start

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Mental Play

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Don't Look at Fingers

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Play-Pedal

Specificity: TBD

Example: TBD

General Problem: TBD

It's subtle, but I can hear that the player pedals either when he plays or even a little before. In fact, this is a STELLAR example of why at French School we were taught to play-pedal. Because if you do not, what you hear is this extra muddiness especially when you accidentally catch notes from the right hand coming into the next pedal.

Music movement is rich, and is most interesting when there are all sorts of dissonant notes coming into the bar, which then resolves nicely into the next clean harmonies. Play-pedal is the only surefire method for clearing out those transient dissonances when coming into the next bar. This is also why half-pedaling and flutter-pedaling are vital techniques to learn.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Memorize to Refine

Specificity: TBD

Example: TBD

General Problem: Best way to focus on technique and musicality.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Technique Patterns

TBD

Boundary Testing

Category: Technique development and musicality

Specificity: Highly generic

Example: Chopin waltz B minor Opus 69 No 2, rapid repeated notes in latter half

General Problem: Something is extremely easy to miss because of technicality, like those rapid repeated notes.

Usage:

Use the continuity rule not just to practice the notes, technique, and musicality. Use the continuity rule to conduct research, specifically how high does your hand have to bounce to ensure you do not miss those rapid repeated notes. Establish the boundary conditions: how high to guarantee you won't miss them, and how low to get a rapid, repeated note pattern.

Benefits:

Knowing the boundaries provides a framework of security that allows for variability during a performance depending on the performer's mood and performing environment.

Other contexts:

- Speed: how fast can you play something before you mess up? How slow can you play something before you lose forward momentum?

- Volume: how loud can you play before you lose the musicality? How soft can you play before you start missing notes?

- How well does this play on a fully tuned and regulated piano, versus one that is not? What adaptations are necessary to play this on a sub-optimal piano?

See also: Continuity Rule

Contributor: Eileen Sauer 2018

Musicality Patterns

TBD

Suspension

Category: Generic

Specificity: TBD

Example: TBD

General Problem: Single note or single chord that does not establish an initial tempo. This gives the performer freedom in terms of musicality.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Novelty

Category: TBD

Specificity: TBD

Example: TBD

General Problem: Repeated notes and phrases practiced and played over and over the same way can become robotic and boring, which can kill a person's passion for music.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Secondary Melody

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Solfege Patterns

TBD

Sightread Ahead

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Learn One Pitch

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Solfege the Notes

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Compositional Patterns

TBD

Flash Card

Specificity: TBD

Example: TBD

General Problem: Stuck in a creative block, or unable to start something.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Stencil Composing

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Variation

Specificity: TBD

Example: TBD

General Problem: Speed up melody, slow it down, invert it, do it backwards

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Notate for Performer

Specificity: TBD

Example: TBD

General Problem: Or, think about the performer.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Performance Patterns

TBD

Preparation

Specificity: TBD

Example: TBD

General Problem: Know environment, or start off with simple piece to gauge piano.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Stabilized Repetoire

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Template

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Template

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Template

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Learning Patterns

TBD

Antifragility

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Decouple Logically Unrelated Elements

Specificity: TBD

Example: TBD

General Problem: Use piano lessons for refinement of technique / musicality, and learning how to memorize. Use solfege to practice how to sightread, conduct time, music fundamentals. Perfection of solfege exercises is not the goal.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Boil It Down

Specificity: TBD

Example: TBD

General Problem: Keep the foundation building blocks simple to showcase something sophisticated. For example, using solfege to improvise using children's nursery rhymes. In doing this, the sophisticated part is highlighted, and all of the other excuses go away. For example: oh, I could never do this because I don't know how to start improvising or I'm scared I'm going to sound bad. Everyone knows children's nursery rhymes. The focus then becomes: how do you weave them in as secondary voices harmonically? How do you transpose and solfegiate the correct notes in a different key?

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Teaching Patterns

TBD

Use Diagnostic Tools

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Preservation Patterns

Passing knowledge from generation to generation.

1. Teach each new generation to become self-sufficient thinkers. Not just teaching that this music has four beats per measure, but asking what is the first question that we ask? (How many beats per measure?) A.k.a. Think at a meta-level.

2. Ensure each new generation has both child witnesses and adult witnesses. The adult witnesses shepherd the child witnesses as they transition into adulthood such that they are able to make sense of their childhood memories and understand the "why?" behind the methodology.

3. Find the right people to teach. Not just those who teach piano, but those with the critical thinking and problem solving skills, communication skills, passion for the French School methodology, and people skills to be able to pass to generations of people the methodology, culture, and mindset.

Leverage

Specificity: TBD

Example: TBD

General Problem: Don't just look for people who can teach music. Look for people who think at a meta level, have critical thinking and problem solving skills, communication skills, and people skills. You can pour your effort into teaching one student at a time. Or pour the same amount of effort into people who will teach generations of students and pass along the methodology, culture, and mindset.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

30/30/30s

Specificity: TBD

Example: TBD

General Problem: Work with those not versed in the right methodology. Know both best practices as well as what not to do and why. This ensures the methodology will not lose its efficacy as it is passed down because it is applied within an incorrect paradigm.

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Mindset Patterns

TBD

Look for the Why

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Music Anti-Patterns

TBD

Practice from Start to Finish

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Stuttering

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

Template

Specificity: TBD

Example: TBD

General Problem: TBD

Usage:

TBD

Benefits:

TBD

Other contexts:

TBD

See also: TBD

Contributor: Eileen Sauer 2018

References

Adler, Samuel. *The Study of Orchestration.* New York: W. W. Norton & Company, Third Edition, 2002,

Chang, Chuan C. *Fundamentals of Piano Practice.* Florida: Third Edition, 2016.

Dannhäuser, A. *Solfège de Solfèges.* New York: G. Shirmer, Inc., 1986.

Mann, Alfred. *The Study of Counterpoint - from Johann Joseph Fux's Gradus ad Parnassum*. New York: W. W. Norton & Company, 1965.

Miyazaki, Ken'ichi. *Learning Absolute Pitch by Children: A Cross-sectional Study.* Music Perception Volume 24, Issue 1. 2006.

Downloadable material

See EileenSauer.com under the Projects > Solfege Guide for the following links:

- Solfege Note Types

- Solfege Note Types Accompaniment

- Solfege Review and Brain Teasers

- Sibelius Notation Checklist

Online References

William Wieland, music instructor: https://www3.northern.edu/wieland/index.htm

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I want to express my deepest gratitude to Bob Marcus, who was my dad's boss when my dad was a physicist working at the AT&T Bell Laboratories think tank in Murray Hill, NJ. His daughters, Karen and Suzanne, took piano lessons at The French School of Music, and Bob's recommendation to my dad changed the course of our family's history. I can't begin to grasp how our lives would have unfolded without French School.

Mademoiselle Yvonne Combe, founder of French School, and her student, Stephen Waters, affected many lives over an almost 90 year period. When Mlle. Combe passed away in 1990, alumni in our generation were still in our 20s and we were nowhere near reaching our full potential. Mlle. Combe, I wish you could have seen how our lives have unfolded.

Judy Waters, this journey wouldn't have happened if you had not kept the school open. The French School of Music celebrated its 90th anniversary in October 2017 because of you, and the events that have unfolded since we restarted solfege classes helped us to understand how impactful the school was, and understand that what we learned from Mlle. Combe is worth passing along. Your family's sacrifice over many decades kept Yvonne Combe's legacy alive for new generations of music students.

Conrad Cummings, my composition professor at Juilliard, has been instrumental in adding to my French School foundation, enabling this guide to give insights into conservatory environments. Thank you for creating a safe and rich environment within which we

could all learn. Walking into your classroom was like coming home.

My conversations over the years with French School alumni Grace Boeringer, Louis Cyrille Martin, Carol Comune, Robert Taub, Vince Di Mura, Wendy Jaffe, Karen Zereconski, Suzanne and Tim Waters, Matthew Chow, Janet Borgobello, Yves Sukhu, and Arhant Rao have been extremely insightful.

Al Pendleton, my Chorale director at Governor Livingston Regional High School, started me on my journey as a composer through the Gifted and Talented Program. He studied music at Westminster Choir College, as did Stephen Waters, and he is an outstanding musician. He once told me that while he understands the value of solfege, he has never used solfege. So while the French School methodology is all that I know, this conversation is a reminder that there are multiple ways to skin a cat. Having said that, neither he, nor my Juilliard professors, have absolute pitch. The French School solfege methodology is designed to help students develop absolute pitch or absolute relative pitch.

My solfege students may not have realized they were guinea pigs in the research needed to write this solfege teaching guide. All of you have surprised me more than you will ever know. Thank you for joining me on this amazing journey.

I'm grateful to John Perez for his non-French School insights, as he is able to tell me exactly why a particular French School approach is so effective. Those of us who were lucky enough to be raised using French School methods can take what we had for granted, and be somewhat naive in our approach. It is because of John that I realized a vital component to teaching one generation to hand

the torch to the next generation involves those trained in the French School method having immersive mentoring sessions with those not trained in the same way, to surface any blind spots. These blind spots need to be documented clearly, so that the French School method remain effective from generation to generation because people know how to adopt this method within the correct framework.

I'm grateful that our Chang family (dad Chuan, mom Merry, and sister Sue-Lynn) has enjoyed decades of interesting dinner conversations around music and French School. My brother-in-law David Hinson has had some interesting comments about synesthesia. And thank you to my husband Frank Sauer, for your support during one of life's most unexpected detours.

About the Author

A New Jersey-based composer of contemporary classical music and some jazz, Eileen's work spans piano, string, and wind instrumentations. She studies composition and orchestration in The Juilliard School's Evening Division.

Eileen has worked as a technologist and real estate investor, (B.S. in Math - Computing from University of Notre Dame), and lives in Jersey City, NJ with her husband Frank and cat Cassie.