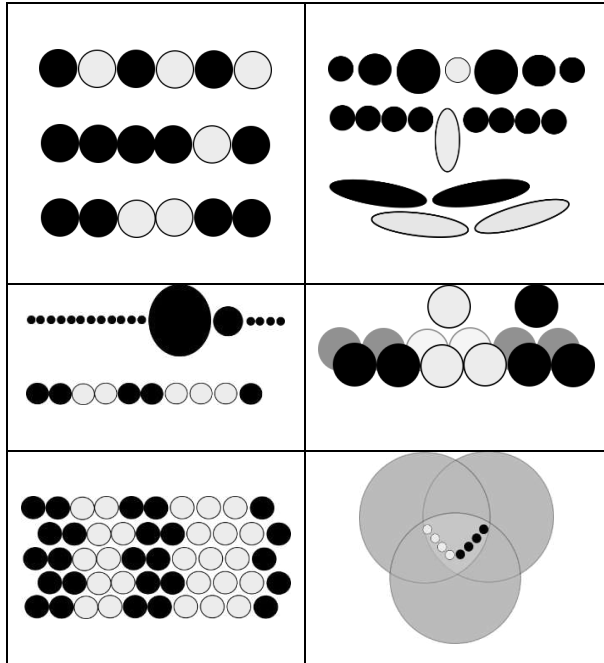


**JEWELRY DESIGN PRINCIPLES:
COMPOSING, CONSTRUCTING, MANIPULATING**
by Warren Feld, Designer



Abstract:

It is not happenstance that some pieces of jewelry draw your attention, and others do not. It is the result of an artist fluent in design. That fluency begins with selecting Design Elements, but it comes to full fruition with the application of Principles of Composition, Construction and Manipulation. This is where the artist flourishes, shows a recognition of shared understandings about good design, and makes that cluster of jewelry design choices resulting in a piece that is seen as both finished and successful. These Principles represent different organizing schemes the artist might resort to. Jewelry artists translate these Principles a little differently than painters or sculptors, in that jewelry presents different demands and expectations on the artist. The better artist/designer achieves a level of disciplinary literacy – selecting Design Elements and applying Principles -- where fluency becomes automatic, accurate, and rapidly applied.

Some pieces of jewelry draw your attention. Others do not.

This is not a matter of happenstance. It is the result of an artist fluent in design. That fluency begins with the selection of Design Elements – the smallest meaningful units of design. But it comes to full fulfillment with the application and manipulation of *Principles of Composition, Construction and Manipulation*. These “*organizing schemes*” reflect what the individual artist wants to express, and how the individual artist anticipates how others will understand and respond to this expression.

Design Elements, which I have discussed in an earlier article ^[1], are like building blocks and function a bit like the vowel and consonant letters of the alphabet. They have form. They have meaning. They can be assembled into different arrangements which extend their meaning and usefulness in expression. Examples: color, shape, texture, point/line/plane, movement, dimensionality, and the like. Each Design Element has a set of expressive attributes. Color can be expressed as a color scheme, or as proportions, or as simultaneity effects. Shape can be geometric or dimensional or recognizable or symbolic. And so forth.

Design Elements function like a vocabulary. They represent universally accepted expressive content. Visualize the analogy between design elements and vocabulary. Picture a “*t*”, perhaps combined with an “*h*”, and then with an “*e*”. Or, picture the difficulty in trying to combine a “*th*” with a “*z*”. Or, still yet, picture how the “*c*” in “*cat*” is pronounced differently than the “*c*” in “*sense*”, yet still recognized as a “*c*”. In similar ways, the artist might decide to use the design elements of “*color*” and “*line*,” and combine them to yield another design element of “*movement*.” Literacy begins with the ability to decode, and this ability centers on the selection and use of Design Elements.

Principles of Composition, Construction and Manipulation function more like a grammar. Given the Design Elements selected by the artist, Principles represent organizing strategies to which the artist resorts when attempting to achieve a piece that will be seen as both “*finished*” and “*successful*”, both by the artist, as well as that artist’s audience. The artist might arrange several design elements

and their expressive attributes to yield a higher level organizing principle. For example, the artist might combine *color(intensity)+line(direction)+shape(geometry)+placement(symmetry)+balance+material*” to yield a sense of “*rhythm.*”

To continue our analogy with vocabulary, grammar and literacy, picture our “*t*”, “*h*” and “*e*” put together to form a full word like “*thesaurus*”, then expanded into an idea, like “*teachers like to use a thesaurus*”, and further expressed, in anticipation of a response, to something like “*but students hate when the teacher asks them to use a thesaurus.*”

Literacy goes beyond decoding; it includes a fluency in how the Design Elements are organized to evoke an emotional response. This involves an intuitive understanding of Principles of Composition, Construction and Manipulation, and how to apply them. While Design Elements are selected primarily based on shared, more universal understandings of what they express, often, Principles are applied in ways more reflective of artist’s hand, and its subjective expression.

The successful jewelry designer has developed a **fluency** in the **Disciplinary Literacy** of jewelry design. Fluency is the ability of the designer to select and connect Design Elements smoothly, in visually and functionally and situationally appropriate ways with understanding. The idea of understanding is broadly defined, to include the artist’s personal goals for expression, as well as the expectations of all the audiences – the wearer, the viewer, the buyer, the seller, the student, the master. The better designer achieves a level of disciplinary literacy where fluency becomes automatic, accurate, and rapidly applied.

This Disciplinary Literacy in jewelry design has a structure all its own. There are four main components to it:

- 1) Vocabulary: Design Elements As The Basis Of Composition
- 2) Grammar: Principles of Composition, Construction and Manipulation
- 3) Strategy: Project Management^[2]
- 4) Context/Culture: Shared Understandings^[3]

This article focuses on the second component – *Principles*.

What Are Principles of Composition, Construction and Manipulation?

Jewelry Design is the strategic application of basic principles of organization and expression to achieve a piece which evokes emotion, resonates, and is appealing as it is worn. Traditionally the art and design worlds referred to these as “Principles of Composition.” Often artists and designers get tripped up on the word *Principles*, and jewelry designers get a bit confused or frustrated with the word *Composition*.

The use of the word “*Principles*” in art and design can be somewhat confusing. These Principles do not represent a set of universal, dependable and repeatable standards to strive for, which we might assume, at first.

A different meaning about “*Principles*” applies here. A Principle is an organizing scheme as a way to combine design elements into a more pleasing whole composition. The design elements include things which are visual effects; but, for jewelry designers, they also include things which functional, as well as things which are more social, psychological, cultural and situational. Principles inform artists in their expressive, authentic performances. Every artist is expected to apply these Principles, but only in ways the artist chooses. There might be better or worse ways to apply them, but no right or wrong ways.

Another aspect of confusion is the use of the word “*Composition*”. I’ve expanded the phrase, though somewhat awkwardly, to “*Principles of Composition, Construction and Manipulation*.” The traditional art and design idea of “*composition*” covers two very different types of jewelry design literacy skills under a single label, namely decoding (Design Elements) and fluency (Principles). The better jewelry designer needs to learn and apply both aspects of disciplinary literacy, but each involves different ways of thinking. As a teacher, both require different sets of strategies for training and educating jewelry designers.

Jewelry designers, by the nature of jewelry, have to deal equally with functional aspects of design, not just artistic composition. Traditional Principles of Composition need to be re-oriented for the jewelry artist to be more sensitive to

the more architectural aspects of design. Design choices are also best understood at the boundary between the art of design and the body it adorns.

Limited to the idea of *composition*, jewelry might be judged successful as “art”, as if it was displayed on a mannequin or easel. But jewelry, in reality, can only be judged as a *constructive, manipulated* result situated at the boundary between art and body; that is, jewelry can only be judged as “art as it is worn.”

In this article, I focus on **Principles of Composition, Construction and Manipulation**. The Principles, as organizing schemes, are intertwined, and, the use of one will often depend on another. Movement might be achieved by the placement of lines, which might also establish a rhythm. Such placement of lines might be symmetrically balanced, with line thinness and thickness statistically distributed evenly through the piece.

These organizing and arranging schemes might include:

- the Positioning and/or Ordering of *things* (*white/black/white/black vs. black/black/black/white*)
- the Volume or Area the piece takes up (*one row of beads vs. 3 rows of beads*)
- the Scale and Size of the pieces (*6mm 6mm 6mm vs. 10mm 10mm 10mm*)
- the Colors, Textures and Patterns of individual pieces, and/or sets or groupings of pieces (*matte/matte/shiny/matte/matte vs. shiny/shiny/matte/shiny/shiny*)
- the Forms (*identifiable sets of pieces, highly integrated*)
- the Materials
- the interplay of Light, Dark, Shadow, Reflection and Refraction (*dark/dark/transparent/dark/dark vs. transparent/transparent/dark/transparent/transparent*)

- the clasp assembly and other supporting systems

Some of these design Principles are applied in similar ways to all art forms, such as painting and sculpture, no matter what the medium.

For other Principles, jewelry creates its own challenges, because all jewelry places some different demands and expectations on the artist than painting or sculpture does. *Jewelry...*

- *functions in a 3-dimensional space, particularly sensitive to position, volume and scale*
- *must stand on its own as an object of art*
- *but must also exist as an object of art which interacts with the body, movement, personality, and quirks of the wearer*
- *serves many purposes, some aesthetic, some functional, some social, cultural or situational*
- *has a much more integrated and inter-dependent relationship of the center piece, strap, fringe, edge, bail and surface embellishment – an arrangement that traditional Art theory rejects. Art sees the center piece as the “art”, and these other things as supporting, not artistic details, like a frame for a painting or a pedestal for a sculpture.*

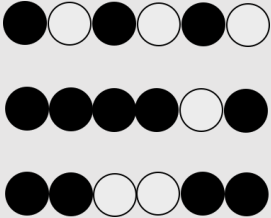
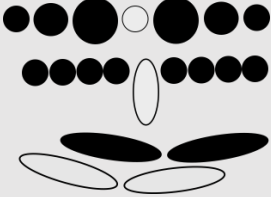
Good jewelry should exude an energy. It should resonate. This energy results from how the artist applies these Principles to compose with, construct and manipulate light and shadow, and their characteristics of warmth and cold, receding and approaching, bright and dull, light and dark. The artist’s piece is judged on whether the resulting piece feels coherent, organized, controlled, and strategically designed, again, as the jewelry is worn. Successful application of these Principles results in a piece which feels finished and successful.

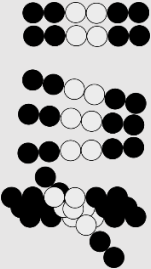
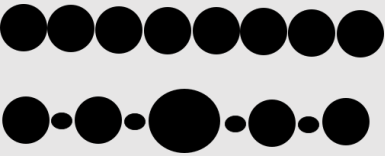
The Principles include,

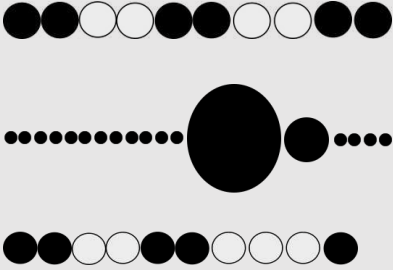
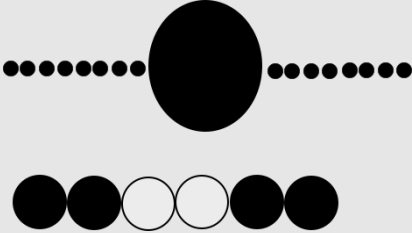
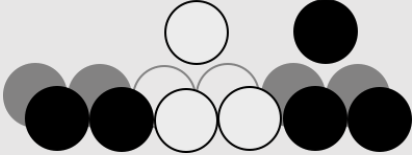
- 1. Rhythm**
- 2. Pointers**
- 3. Linear and Planar Relationships**
- 4. Interest**
- 5. Statistical Distribution**

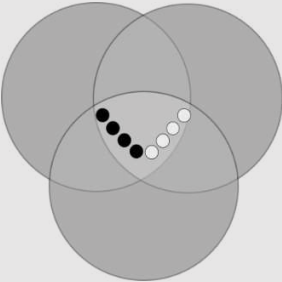
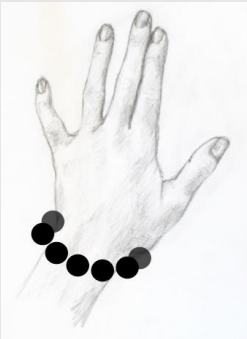
- 6. Balance
- 7. Forms, Their Proportions, Distributions and Dimensionality
- 8. Temporal Extension: Time and Place
- 9. Physical Extension: Functionality
- 10. Parsimony (*something similar to, but a little beyond harmony and unity*)

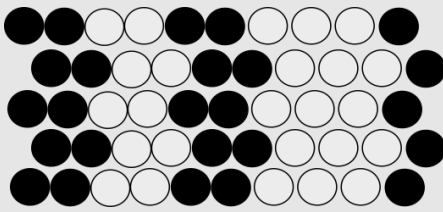
TABLE OF PRINCIPLES

Principles of Composition, Construction, and Manipulation (Organizing Schemes)	What the Principle is About	How Principle Might Get Expressed as Organizing Schema
<p>1. Rhythm</p> 	<p><i>This is how the piece leads the viewer through sequences of steps. It is a measure of the degree the piece engages the viewer's eye.</i></p> <p><i>There is a continuance, a flow or a feeling of movement from one place of the piece to another.</i></p>	<p><i>Repetition</i></p> <p><i>Pattern</i></p> <p><i>Random</i></p> <p><i>Regular</i></p> <p><i>Alternating</i></p> <p><i>Flowing</i></p> <p><i>Progressive</i></p> <p><i>Vertical, Horizontal, Diagonal, Overlapping, Piercing</i></p> <p><i>Placement</i></p>
<p>2. Pointers</p> 	<p><i>Pointers are places of emphasis, dominance or focus. Certain elements assume more importance than others within the same composition.</i></p>	<p><i>Isolating</i></p> <p><i>Directional</i></p> <p><i>Contrast</i></p> <p><i>Anomaly</i></p> <p><i>Leading</i></p> <p><i>Convergence</i></p> <p><i>Size, Weight, Color Gradient</i></p> <p><i>Framing</i></p> <p><i>Focusing and Depth</i></p> <p><i>Absence</i></p> <p><i>Implied</i></p>

<p>3. Linear and Planar Relationships</p> 	<p><i>The degree the piece is not disorienting; obvious what is “up” and what is “down”.</i></p> <p><i>Orienting and Directional</i></p>	<p><i>Straight or Curved</i> <i>2-D or 3D</i> <i>Violating, Crossing or Intersecting, Interpenetrating</i> <i>Parallel or Aligned</i> <i>Perpendicular</i> <i>Angular or Diagonal</i> <i>Vector</i> <i>Fixed, Directional, Infinite, or Disappearing</i> <i>Continuous, Broken or Perforated</i> <i>Radial</i> <i>At Edges or Within; Framed or Bound</i> <i>Thin or Thick</i> <i>Textured or Smooth</i> <i>Opaque or Transparent</i> <i>Moving, Rotating, Spinning, Darting, Flashing</i> <i>Silhouette</i></p>
<p>4. Interest</p> 	<p><i>The degree the artist has made the ordinary... “noteworthy”</i></p>	<p><i>Add variety</i> <i>Give person an experience</i> <i>Vibrance, Intensity</i> <i>Unexpected use or positioning</i> <i>Surprise</i> <i>Sense of strength or fragility</i> <i>Symbolic meaning</i> <i>Perspective</i> <i>Inspirational</i> <i>Pattern</i> <i>Clash</i> <i>Juxtaposition</i> <i>Simultaneity effects</i></p>

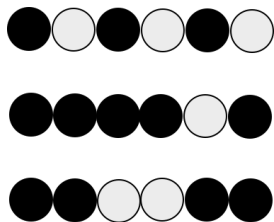
<p>5. Statistical Distribution</p> 	<p><i>How satisfying the numbers and sizes and measures of objects within the piece are</i></p>	<p><i>Equality, Equity, Equal Weight, Mass, Volume, Visual Effect (or the opposite of equality) Randomness Color proportions Scale Measurements Numbers of</i></p>
<p>6. Balance</p> 	<p><i>How satisfying the placement of objects (and their attributes) is</i></p>	<p><i>Equilibrium in Weight, Mass, Volume, Visual Effect Symmetry or Asymmetry Pattern or No Pattern Regular or Irregular Equalizing visual forces Scale Permanent, Illusory, Contingent Placement, Alignment, Proximity, Repetition Radial Identical or Similar</i></p>
<p>7. Forms, Their Proportions, Distributions, and Dimensionality</p> 	<p><i>Jewelry often can be structured in terms of segments, components or forms. How the pieces get interconnected or amassed is of concern.</i></p>	<p><i>Unique, Singular, Parallel/Symmetrical, Repeated, Multiple Evolving Variety Segmentation 2-D or 3-D Realistic or Abstract Geometric or Organic Complete or Incomplete Layering, Overlapping Fringing, Surface Embellishment Continuity Coordinating Clashing, Off-putting</i></p>

<p>8. Temporal Extension: Time and Place</p> 	<p><i>Any piece of jewelry must be acceptable within a certain historical, social, cultural or situational context.</i></p>	<p><i>Visual Expectation Materials Expectation Techniques/Technology Expectation Referents, Inscriptions, Images Symbolism Themes Rule-bound or not Revival style or Contemporized Traditional style Appropriateness/Relevance to situation or context Coordination with situation or context</i></p>
<p>9. Physical Extension: Functionality</p> 	<p><i>The degree the piece is designed so that it accommodates physical stresses when the piece is worn</i></p>	<p><i>Jointedness and Support (links, rivets, hinges, loops, unglued knots, and the like) Drape, Flow, Movement (built-in features allowing adjustment to body shape or body movement) Length, Fit Adjustability Choices of stringing material or assembly strategy Clasp Assembly (how piece attached to clasp) Strap, Bail, Pendant, Fringe, Embellishment Stiffness, Looseness, Bending, Conforming Inclusion of technology Structural Integrity Application of architectural principles of construction Physical mechanics Weight-bearing</i></p>

<p>10. Parsimony (something similar to but beyond harmony and unity)</p> 	<p><i>There should be no nonessential elements; the addition or subtraction of one element or its attribute will make the piece less satisfying</i></p>	<p><i>Length, Volume, Mass, Weight, Visual Effects Goodness of fit Sufficient balance between unity and variety to evoke an emotional response and resonance An economy in the use of resources A result which feels finished and successful, reflecting the artist's hand, as well as an anticipation of shared understandings among all audiences – viewer, wearer, buyer, seller, student, master</i></p>
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THE PRINCIPLES IN MORE DETAIL

1. Rhythm



Movement is the path our eyes follow when we look at a work of art, and it is generally very important to keep a viewer's eyes engaged in the work. Without movement, artwork becomes stagnant. A few good strategies to evoke a sense of movement (among many others) are using diagonal lines, placing shapes so that they extend beyond the boundaries of the picture plane, and using changing values.

Rhythm is one Principle used to shape the viewer's experience with the piece. Rhythm is how the piece leads the viewer through sequences of steps. It is a measure of the degree the piece engages the viewer's eye.

There is a continuance, a flow or a feeling of movement from one place of the piece to another.

Repetition and pattern are key here. The artist might achieve a rhythm by varying or repeating colors, textures, sizes, forms. The rhythm might be slow, fast, predictable, random, staccato, measured, safe, edgy, and so forth. The intervals between repetitions and patterns can create a sense of rhythm in the viewer and a sense of movement. Repetitions and patterns can be random, regular, alternating, flowing, progressive – there are many directions the artist can go in establishing a rhythm.

When a piece has multiple and coordinated rhythms, we call this **Symphonic Rhythm**. For example, in a piece, there might be a clear rhythm set by the use of colors throughout the piece, as well as the positioning of definable forms, such as a series of beaded leaves or other shapes.

The Rhythm should assist the viewer in cognitively making a complete circle around the piece. You don't want the viewer to lose interest, get bored, or fall flat, before the eye and brain can make that complete circle.

Example:

Black-o-Black-o-Black-o-White-o-Black-o-Black-o-Black-o-White-o

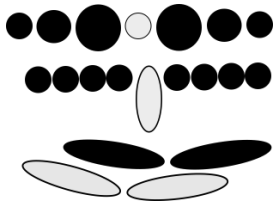
Or,

Black-o-White-o-Black-o-White-o-Black-o-White-o-Black-o-White-o

The better designer can empower the design, if using Rhythm in the right way.

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## 2. Pointers



Pointers are places of emphasis, dominance or focus. Certain elements assume more importance than others within the same composition.

Pointers guide the viewer to a specific place, or focal point. Cognitively, you want to create the place for the eye/brain to come to rest.

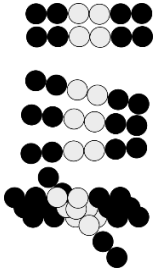
Examples:

- Something can be centered
- The color can be varied, say from dark to light, to serve as an “arrow” or “Pointer” to a section of the necklace
- The positioning of the clasp might serve as a pointer
- A dangling pendant might serve as a pointer
- The size of the beads can be varied, such as smallest to largest, to serve as an “arrow” or “Pointer”
- Coordinating the placement of Focal Point on jewelry with the pattern in the clothing upon which the piece will rest
- Something can be strategically off-centered.

The better designer is able to capture the viewer’s attention to more important parts of the piece.



### 3. Linear and Planar Relationships



This is the degree the piece is not disorienting to the viewer, or particularly confusing in terms of what is up and what is down.

People always need to orient themselves to their surroundings, so that they know what is up and what is down. They usually do this by recognizing the horizontal planes of the floor and the ceiling of a room (ground and sky outside), and the vertical planes of the walls of a room (buildings, trees and the like outside).

Jewelry must assist, or at least not get in the way, of this natural orienting process. It accomplishes this in how its “lines” are arranged and organized. If a piece is very 3-dimensional, then how its “planes” are arranged and organized becomes important, as well.

Design elements we might use to achieve a satisfactory planar relationship within our piece:

- a strategic use of lines and planes
  - shapes
  - boundaries
  - -silhouettes
  - contours
- symmetry
- or, more difficult to achieve, a satisfying asymmetry
- a planar pattern in how each section of the piece relates to the other sections
- how sections of the piece interlock
- how we “draw and interrelate” parallel lines/planes, perpendicular lines/planes and curved lines/planes within the piece

Example:

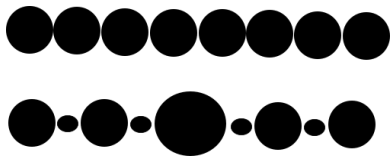
How can a person truly pull off wearing only one earring? After all, visually, it pulls the person off to one side, thus violating the basic orienting planar relationships. What about the composition of the earring, allows this to work; what about the composition doesn't?

Example:

Wearing a necklace, where the clasp is worn on the side, instead of the back. Again, what about the composition of the necklace, allows this to work; what about the composition doesn't?



#### 4. Interest



“Interest” means the degree to which the artist makes the ordinary...noteworthy.

Here the artist demonstrates how to balance off and control “variety” with “unity” and “harmony”. Without unity and harmony, the piece becomes chaotic. Without variety, the piece becomes boring, monotonous and uninteresting.

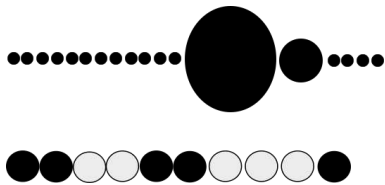
Arranging and organizing Design Elements might involve:

- *selection of materials and mix of materials*
- *selection of color combinations*
- *varying the sizes of things*
- *pushing the envelop on interrelating planar relationships among the sections of the jewelry*
- *playing with the rhythm*

- *clever use of a focal point*



## 5. Statistical Distribution



The artist is always concerned with the number or size or scale or measurement of things. This principle focuses on these *statistics*. With this principle, we are *not* concerned with the placement or balance of things – just the numbers and measurements.

We ask: How pleasing and satisfying are ***the selection of*** the numbers, sizes, proportions, volumes/weights, and color/textures of objects the artist wants to use in the piece. The artist might, at this point, anticipate creating a pattern, or not.

Examples:

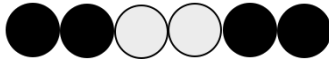
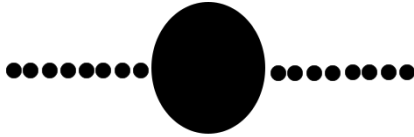
BIG-o-BIG-o-small-o-BIG-o-BIG-o-small-o-

PURPLE-o-PURPLE-o-PURPLE-o-YELLOW-o-PURPLE-o-YELLOW-o-





## 6. Balance



Balance has to do with placement. How pleasing or satisfying is *the placement* of objects (and their attributes) within a piece?

Usually, the designer is trying to achieve a feeling of equality in weight, attention or attraction of the various visual design elements. The design attributes would include such things as the positioning or relative positioning of the materials used, the colors, textures and patterns, the sizes and scales.

The artist might play with placement in terms of proximity, alignment or repetition.

There are different types of balance.

(1) symmetry: the use of *identical* compositional units on either side of a vertical axis

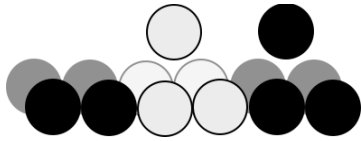
(2) approximate symmetry: the use of *similarly* balanced compositional units on either side of a vertical axis

(3) radial symmetry: an even, radiating out from a central point to all four quadrants (directions) of the shape's plane (surface)

(4) asymmetry: even though the compositional units are not identical on either side of a vertical axis, there is a "felt" equilibrium of the total piece. Often, with jewelry, this equilibrium depends on what clothes or other jewelry the person is wearing, or something about that person's body/body shape.



## 7. Forms, Their Proportions, Distributions and Dimensionality



Jewelry often can be structured in terms of segments, components or forms. How are pieces interconnected or amassed? Is this achieved through optical effects or reality?

The designer is concerned with managing these structures in terms of proportions, distributions and/or dimensionality. The artist makes choices about how each part relates to the whole in terms of scale or relevance.

The artist might play with things like:

*Layering*

*Surface embellishment*

*Fringing*

*Curvature*

*Overlapping planes*

*Balance*

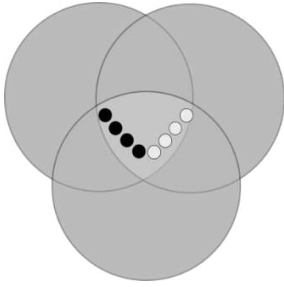
The better designer creates pieces where the whole is greater than the sum of the parts.

Example:

Flat loomed bracelet and a button clasp, that sits so high on the bracelet, that it detracts from the 2-dimensional reason-for-being of the piece.

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8. Temporal Extension: Time and Place



Any piece of jewelry must be acceptable within a certain historical, social, cultural or situational context.

For example, is a piece appropriate for a wedding also appropriate for office wear? Is a great University of Tennessee Orange Necklace as successful when worn to a Vanderbilt football game?

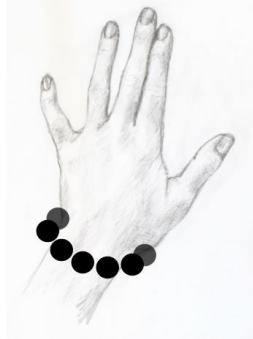
Temporal Extension may narrowly refer to one specific wearer in particular, or more broadly to group, situational, social or societal expectations.

Other examples:

- white pearls are associated with bridal jewelry
- using metalized plastic beads, where the plating chips off in a short period of time, should not be used in an heirloom bracelet
- making a matching set of earrings and necklace for jewelry that typically should be worn as a matching set
- gifting a carved jade pendant with an message-word carving inappropriate for the religion of the person receiving it

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## 9. Physical Extension: Functionality



Any piece of jewelry must be functional when worn. Functionality has to do with such things as movement, drape, comfort, flow and durability. The piece of jewelry needs to feel comfortable when worn, always look good on the wearer no matter what the wearer is doing, and be durable. This involves a lot of building in understandings of physical mechanics and architectural principles of construction.

When there is (or should be) movement in a piece, there should be clear evidence that the designer anticipated where the parts came from, and where they are going to. Jewelry is worn by people who move, so the design should be a natural physical extension to such movements, and the stress they put on the piece.

For example, in a necklace, the clasp should remain on the neck, even as the beadwork moves with the person, without the necklace turning around on the neck, or breaking.

Example: The dangle earring which has the dangle stuck in a 90 degree angle.

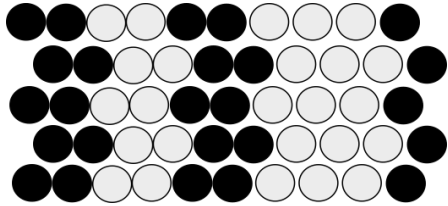
Example: The crimped bracelet which breaks at the crimp.

Example: The bracelet too tight when the design is turned into a circle placed around the wrist



## 10. Parsimony

*(something similar to, but a little bit beyond harmony and unity)*



At the point where the piece is judged to be finished and successful, there should be no nonessential elements. When the piece is finished and successful, it should evoke emotions and resonate.

The designer should achieve the maximal effect with the least effort or excess.

There is a tendency of beaders and jewelry makers to over-do:

- over-embellish the surface
- add too much fringe
- repeat themes and design elements too often
- use too many colors

### **Parsimony vs. Unity**

In art, the traditional measure of completion and success was a feeling or sense of “Unity.” Unity signified how everything felt all right. All the Design Elements used, and how they were coordinated and placed, were very coherent, clear, harmonious and satisfying.

I think the idea of *unity begins to* get at the place we want to end up. But this concept is not concrete enough for me. You can have unity, but the piece still seen as boring when there is no variety. This condition is unacceptable as a principled outcome of jewelry construction. Finished and successful jewelry should evoke emotions and resonate. You can have unity, but the assessments rely too much on universal, objective perceptions of design elements and their attributes. The artist, the wearer, and the situation are too easily left out of the equation.

Jewelry creation usually demands a series of judgment calls and tradeoffs between aesthetics and functionality, artist goals and audience understandings and expectations, a full palette of colors, shapes and textures and a very limited one. A measure of completeness and success needs to result from the forced choice decisions of the artist. It needs to account for the *significance* of the results, not just the *organization* of them. It needs to explain the *Why*, not just the *What*.


For me, the more appropriate concept here is "*Parsimony*." Parsimony is sometimes referred to in art and design as "*Economy*", but the idea of economy is reserved for the visual effects. For jewelry designers, we want that economy or parsimony to apply to functional and situational effects, as well. When the finished and successful piece is parsimonious, the relationship of all the Design Elements and their expressed attributes will be so strong, that to add or remove any one thing would diminish, not just the design, but rather the significance of the design.

*Parsimony...*

- forces explanation; its forced-choice nature is most revealing about the artist's understandings and intentions
- relies on evidence more so than assumptions to get at criticality
- focuses examination of the few elements that make a difference

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THINKING ROUTINE^[4]: LOOK – SCORE – EXPLAIN

<p>LOOK: CLASSICISM NECKLACE</p>  <p>Warren Feld, 2001.</p>	<p>Materials and Description: Three strands, druk rondelles Czech glass, in matte amethyst, matte olivine, and matte topaz. Center, overlapping agate stones.</p> <p>At the center, each of the three strands pass through a 3-hole separator bar, and through one of three thin sterling silver tubes.</p> <p>The centerpiece stones slide over the top and bottom tubes. The middle tube is sandwiched between the stones. These stones can spin around on the tubes, allowing them to adjust to body shape and movement, but the middle tube restricts the movement to maintain the general visual appearance as in the image.</p> <p>S-clasp in back.</p>
<p>KEY DESIGN ELEMENTS: <i>(see key at bottom of table for list)</i></p> <ol style="list-style-type: none"> 1. COLOR 2. BALANCE AND DISTRIBUTION 3. SHAPE 4. POINT/LINE/PLANE 5. MATERIALS 6. MOVEMENT 7. DIMENSIONALITY 8. TECHNIQUE/TECHNOLOGY 	<p>KEY ATTRIBUTES OF DESIGN ELEMENTS:</p> <ol style="list-style-type: none"> 1a. Some Tonal quality and finish 1b. Split Complementary color scheme 1c. Gradation dark to light 2a. Symmetry 3a. Same size druk rondelles 4a. Strong lines core design feature 4b. Overlapping centerpiece stones establishes 2 planes; can move but restricted from violating planes 5a. Mixing glass, metal and gemstone 6a. Center stones allowed to spin on tubes 7a. Layering of center stones 8a. Unexpected connection of strap to centerpiece

SCORE:

SCORE CARD ON PRINCIPLES:

DESIGN CRITERIA	Very Unsatisfying.....Very Satisfying
1. Rhythm	1 2 3 4 5
2. Pointers	1 2 3 4 5
3. Linear and Planar Relationships	1 2 3 4 5
4. Interest	1 2 3 4 5
5. Statistical Distribution	1 2 3 4 5
6. Balance	1 2 3 4 5
7. Forms	1 2 3 4 5
8. Temporal Extension: Time, Place	1 2 3 4 5
9. Physical Extension: Functionality	1 2 3 4 5
10. Parsimony	1 2 3 4 5

EXPLAIN:

<p>RHYTHM:</p> <p>How you see this playing out in this piece:</p> <p>One smooth flow from clasp to centerpiece down straps</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>BALANCE AND DISTRIBUTION POINTERS</p>
	<p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: Mixing different sizes; adding more colors within each strand; changing length</p>
	<p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p>

	<p>If cannot get any one of 3 colors or finishes or sizes, would have to change to 3 different split complementary colors and new stones for focal point</p>
<p>POINTERS:</p> <p>How you see this playing out in this piece:</p> <p>Overlapping stones in centerpiece</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>POINT/LINE/PLANE</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Strengthen: better color coordination between center piece and straps</p> <p>Weaken: mix colors/sizes in strap; change rhythm in strap; add patterns</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>Would need to have alternative gemstones, similar sizing to original, color coordinated with strap colors</p>
<p>LINEAR/PLANAR RELATIONSHIPS:</p> <p>How you see this playing out in this piece:</p> <p>Strong sense of line and downward direction towards centerpiece, represented by 3 strands, strong implementation of 3-color scheme</p> <p>Overlapping planes in centerpiece</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>POINT/LINE/PLANE STRUCTURE/SUPPORT</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: have less fluid structure support connecting one side through centerpiece to other side; have only one center stone rather than two which overlap</p>

	<p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If hole in center stones not big enough to slide over sterling silver tube, would have to make holes larger, find thinner tubes or alternative stones</p>
<p>INTEREST:</p> <p>How you see this playing out in this piece:</p> <p>Overlapping stones in centerpiece Structure of tubes and stones in centerpiece, particularly in terms of allowing and restricting movement</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>POINT/LINE/PLANE MATERIAL MOVEMENT STRUCTURE/SUPPORT</p> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: no overlap stones and no movement; put pattern or change bead sizes in strap</p> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If could not create the structure creating the overlapping stone centerpiece, use a centerpiece with some dimension that supports the rhythm of the piece.</p>
<p>STATISTICAL DISTRIBUTION:</p> <p>How you see this playing out in this piece:</p> <p>One shape and size of bead in the 3 straps. Single color within each strand.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>SHAPE COLOR</p> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS....</p>

	<p><i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: vary shape or add more colors</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If could not get enough beads in specific size, shape, color for each strap, come up with different design.</p>
<p>BALANCE:</p> <p>How you see this playing out in this piece:</p> <p>Single color in each strand Symmetry Repeated same length in each strand</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>BALANCE/DISTRIBUTION POINT/LINE/PLANE FORM/SEGMENTS/COMPONENTS</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: Make piece unbalanced, or asymmetrical</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If could not restrict the movement of the center stones, would lose visual balance; would have to come up with different strategy for restricting movement, or just use one, rather than two stones.</p>
<p>FORMS:</p> <p>How you see this playing out in this piece:</p> <p>Clear forms: - 3 strands, one of each color - clear sense of right side and left side and</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>FORM/SEGMENTS/COMPONENTS COLOR BALANCE/DISTRIBUTION POINTER</p>

<p>center - segmented centerpiece</p>	<p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: create a size or color pattern in the straps; additional segmentation</p>
<p>TEMPORAL EXTENSION:</p> <p>How you see this playing out in this piece:</p> <p>Piece has a classical elegance to it. Can picture it worn in a more upscale social setting like a banquet or dinner party.</p>	<p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If could not get enough beads in specific size, shape, color for each strap, come up with different design or color scheme.</p> <hr/> <p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>FORMS/SEGMENTS/COMPONENTS COLOR BALANCE/DISTRIBUTION BEAUTY/APPEAL CONTEXT/SITUATION/CULTURE</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: brighter or primary colors; glossy color finishes; shorter or longer length</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If could not get enough beads in specific size, shape, color for each strap, come up with different design or color scheme.</p>
<p>PHYSICAL EXTENSION:</p> <p>How you see this playing out in this piece:</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>STRUCTURE/SUPPORT TECHNIQUE/TECHNOLOGY</p>

<p>The support structure for the centerpiece which both allows and restricts movement.</p> <p>The 3 strands on each side of the necklace can move independently and allow better movement, drape and flow.</p>	<p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: leave out middle tube which lays between top and bottom center stone; connect the 3 strands together at two or more places along their length.</p> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If could not get support structure to work, come up with different design.</p>
<p>PARSIMONY:</p> <p>How you see this playing out in this piece:</p> <p>The choice of colors, materials, bead sizes, length of strands, symmetry</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>SHAPE COLOR POINT/LINE/PLANE MOVEMENT FORMS/SEGMENTS/COMPONENTS BALANCE/DISTRIBUTION MATERIAL</p> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: change any color, material, bead size, length, symmetry</p> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If did not have sufficient access to these resources, would have to come up with a different design.</p>

KEY DESIGN ELEMENTS:			
<i>COLOR</i>	<i>MOVEMENT</i>	<i>BALANCE / DISTRIBUTION</i>	<i>DIMENSIONALITY</i>
<i>SHAPE</i>	<i>COLOR BLENDING</i>	<i>REFERENTS</i>	<i>FORM, SEGMENTS, COMPONENTS</i>
<i>TEXTURE/PATTERN</i>	<i>THEME/SYMBOLS</i>	<i>CONTEXT, SITUATION, CULTURE</i>	<i>CRAFTSMANSHIP</i>
<i>POINT/LINE/PLANE</i>	<i>BEAUTY, APPEAL</i>	<i>NEGATIVE , POSITIVE SPACES</i>	<i>TECHNIQUE/TECHNOLOGY</i>
<i>MATERIAL</i>	<i>STRUCTURE, SUPPORT</i>	<i>LIGHT, SHADOW</i>	

LOOK:

THE BLUE WATERFALL NECKLACE



Warren Feld, 2001.

Materials and Description:

Mix of glass, crystal, and sterling silver beads.

Each segment of beads has a different number of bead, and different sizes/color/finish of beads within it.

The colors are not part of a color scheme, and would be seen to clash if compared one to one outside of their use in the bracelet. Example: sapphire blues and montana blues; golds and silvers; matte and glossy.

The segments nearer the clasp are shorter than those further from the clasp.

The sterling silver tubes are all curved.

There is no focal point per se.

The clasp is an adjustable hook and eye choker clasp.

<p>KEY DESIGN ELEMENTS: <i>(see key at bottom of table for list)</i></p> <ol style="list-style-type: none"> 1. COLOR 2. COLOR BLENDING 3. BALANCE AND DISTRIBUTION 4. POINT/LINE/PLANE 5. MOVEMENT 6. SHAPE 7. STRUCTURE / SUPPORT 8. FORM /SEGMENTS/ COMPONENTS 	<p>KEY ATTRIBUTES OF DESIGN ELEMENTS:</p> <ol style="list-style-type: none"> 1a. No conformance to color scheme, though leans toward the monochromatic 2a. Simultaneity effects 3a. Feels balanced though there the distribution of sizes, numbers and segment lengths varies within each strand and between each strand 4a. Brings your eye down to a central place, but no specific focal point 4b. Curved lines distort the linearity 5a. Expresses feeling of moving water, but no moving parts 6a. Curved tubes key element 6b. Bead of different shapes 7a. Adjustable choker clasp allows wearer to adjust necklace to body, to achieve that optimum sense of balance and movement 8a. Consists of each length segments separating unequal length segments. 8b. Important that segments on both strands do not match up with each other, but feel staggered 8c. Important that no segment shows dominance or becomes a clear focal point.
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SCORE:

SCORE CARD ON PRINCIPLES:

DESIGN CRITERIA	Very Unsatisfying.....Very Satisfying
1. Rhythm	1 2 3 4 5
2. Pointers	1 2 3 4 5
3. Linear and Planar Relationships	1 2 3 4 5

4. Interest	1 2 3 4 5
5. Statistical Distribution	1 2 3 4 5
6. Balance	1 2 3 4 5
7. Forms	1 2 3 4 5
8. Temporal Extension: Time, Place	1 2 3 4 5
9. Physical Extension: Functionality	1 2 3 4 5
10. Parsimony	1 2 3 4 5

EXPLAIN:

<p>RHYTHM:</p> <p>How you see this playing out in this piece:</p> <p>The forms or segments alternate between clusters of beads and a curved sterling silver tube.</p> <p>The length of each bead cluster varies, with longer clusters furthest from the clasp.</p> <p>Staggered alignment of forms.</p> <p>The perceived “weight” of the left side seems the same as the perceived “weight” of the right side.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>FORM, SEGMENTS, COMPONENTS BALANCE, DISTRIBUTION</p>
	<p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: making every bead cluster the same length and the same assortment of beads; having a clear focal point; using straight rather than curved tubes; having forms in both strands align more tightly.</p>
	<p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>Can't get curved sterling silver tubes, will need to find alternative, either plated, or different sizes</p>
<p>POINTERS:</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p>

<p>How you see this playing out in this piece:</p> <p>There is no specific pointer per se, but piece feels as if it has a definite top and bottom, and brings your eye downward.</p>	<p>POINT, LINE, PLANE BALANCE, DISTRIBUTION</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: Adding too much color/size variation within each cluster of beads.</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If desired effect of a waterfall was achieved, would have to rethink the piece.</p>
<p>LINEAR/PLANAR RELATIONSHIPS:</p> <p>How you see this playing out in this piece:</p> <p>Piece dependent on staggered clustering of points and connecting curved lines.</p> <p>The two strands and the forms suggest a greater dimensionality than 2-D.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>POINT, LINE, PLANE FORMS, SEGMENTS, COMPONENTS</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: making relationship of parts more consistent, including using straight lines rather than curves; lining up the two strands more symmetrically</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If piece felt too flat, work more with sizes and shapes of beads in each cluster.</p>
<p>INTEREST:</p> <p>How you see this playing out in this piece:</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>COLOR BLENDING FORM, SEGMENTS, COMPONENTS</p>

<p>Piece evokes feeling of a waterfall.</p> <p>Piece feels finished and successful.</p>	<p>SHAPE TEXTURE, PATTERN BALANCE, DISTRIBUTION LIGHT, SHADOW DIMENSIONALITY</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: making piece longer or shorter; making forms more consistent in size and design; giving piece clear focal point</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>The bead colors are carefully matched and coordinated through simultaneity effects. If cannot get same beads, near very close substitutes, or need to redesign cluster from start.</p>
<p>STATISTICAL DISTRIBUTION:</p> <p>How you see this playing out in this piece:</p> <p>Selection of colors, sizes and shapes within and across bead clusters.</p> <p>Numbers of clusters and numbers of sterling silver curved tubes.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>POINT, LINE, PLANE BALANCE, DISTRIBUTION</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: more consistency in size, shape, color, form</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p>

	<p>The bead colors and sizes are carefully matched and coordinated through simultaneity effects. If cannot get same beads, near very close substitutes, or need to redesign cluster from start.</p>
<p>BALANCE:</p> <p>How you see this playing out in this piece:</p> <p>Piece feels balanced, although the forms do not line up, and in reality are made up of different colors/shapes/sizes of beads.</p> <p>Shorter clusters of beads near clasp; longer near bottom of necklace.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>BALANCE, DISTRIBUTION FORM, SEGMENTS, COMPONENTS POINT, LINE, PLANE</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: more consistency in size, shape, color, form</p> <hr/> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>If the placement of colors/shapes/sizes does not work, have to rethink the design.</p>
<p>FORMS:</p> <p>How you see this playing out in this piece:</p> <p>Two types of forms – bead clusters and single sterling silver curved tubes.</p> <p>Forms vary in length and makeup.</p> <p>Forms in both strands feel coordinated, but do not align or include the same or parallel colors/shapes/sizes.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>POINT, LINE, PLANE FORM, SEGMENTS, COMPONENTS</p> <hr/> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: More standardizing of lengths and bead colors, shapes, sizes; changing the patterning from alternating clusters and long curved tubes, to something else</p>

	<p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>Could not get curved tubes, have to rethink design.</p>
<p>TEMPORAL EXTENSION:</p> <p>How you see this playing out in this piece:</p> <p>We expect this piece can be worn both casually and formally.</p> <p>Piece has a very fluid feel to it, and we expect that this sense of fluidity will always be felt, no matter where the piece is worn.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>REFERENTS POINT, LINE, PLANE FORM, SEGMENTS, COMPONENTS</p> <p>WHAT DESIGN CHOICES MIGHT WEAKEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: More standardizing of lengths and bead colors, shapes, sizes; changing the patterning from alternating clusters and long curved tubes, to something else</p> <p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>Could not get curved tubes, have to rethink design.</p>
<p>PHYSICAL EXTENSION:</p> <p>How you see this playing out in this piece:</p> <p>Adjustable necklace clasp allows wearer to adjust the piece, so that both strands lay so that they evoke this feeling of a waterfall. Otherwise, piece would not lay right on every body shape.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>TECHNIQUE/TECHNOLOGY</p> <p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: use of fixed clasp</p>

	<p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>Could not get an adjustable choker clasp, would have to craft something to be adjustable</p>
<p>PARSIMONY:</p> <p>How you see this playing out in this piece:</p> <p>Piece is neither too short or too long.</p> <p>Forms in piece do not seem to need to be longer or shorter or more consistent or less consistent.</p>	<p>ESTABLISHED BY KEY DESIGN ELEMENTS:</p> <p>FORM, SEGMENT, COMPONENTS POINT, LINE, PLANE BALANCE, DISTRIBUTION COLOR BLENDING POINTER</p>
	<p>WHAT DESIGN CHOICES MIGHT WEAKEN OR STRENGTHEN THIS.... <i>(examples: change length, shapes, lines, bead size, bead color, bead placement)</i></p> <p>Weaken: More standardizing of lengths and bead colors, shapes, sizes; changing the patterning from alternating clusters and long curved tubes, to something else; changing length or silhouette of necklace</p>
	<p>WHAT IF CONTINGENCIES... <i>(examples: If cannot get some bead, color, size, finish, clasp, what could you resort to instead)</i></p> <p>Could not achieve color blending, sense of balance, or an up-down orientation, then would need to rethink design.</p>

KEY DESIGN ELEMENTS:			
<i>COLOR</i>	<i>MOVEMENT</i>	<i>BALANCE / DISTRIBUTION</i>	<i>DIMENSIONALITY</i>
<i>SHAPE</i>	<i>COLOR BLENDING</i>	<i>REFERENTS</i>	<i>FORM, SEGMENTS, COMPONENTS</i>

<i>TEXTURE/PATTERN</i>	<i>THEME/SYMBOLS</i>	<i>CONTEXT, SITUATION, CULTURE</i>	<i>CRAFTSMANSHIP</i>
<i>POINT/LINE/PLANE</i>	<i>BEAUTY, APPEAL</i>	<i>NEGATIVE , POSITIVE SPACES</i>	<i>TECHNIQUE/TECHNOLOGY</i>
<i>MATERIAL</i>	<i>STRUCTURE, SUPPORT</i>	<i>LIGHT, SHADOW</i>	

FOOTNOTES

[1] Feld, Warren. "Jewelry Design Composition: Playing with Building Blocks Called Design Elements," 3/17/2018

[2] Feld, Warren. "Jewelry Design: A Managed Process," Klimt02, 2/2/18.
<https://klimt02.net/forum/articles/jewelry-design-managed-process-warren-feld>

[3] *Shared Understandings*. In another graduate education class, the major text reviewed the differences between understanding and knowledge. The question was how to teach understanding. Worth the read to gain many insights about how to structure teaching to get sufficient understanding to enrich learning. ***Understanding by Design*** by Grant Wiggins and Jay McTighe, 2nd Edition, Association for Supervision and Curriculum Development, 2005.

[4] *Thinking Routines*. I teach jewelry design. I find it useful to engage students with various ways of thinking out loud. They need to hear me think out loud about what choices I am making and what things I am considering when making those choices. They need to hear themselves think out loud so that they can develop strategies for getting more organized and strategic in dealing with information and making decisions. My inspiration here was based on the work done by ***Visible Thinking by Project Zero at Harvard Graduate School of Education***.