# Cognitive Jigs: Content-Free, Modular, Molecular, Structures for Understanding and Problem Solving

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**Abstract**: Without knowing them by name, humans have used *cognitive jigs* for millennia (e.g., analogies, metaphors, similes, lists, tables, graphs). They are among the most successful cognitive structures available to humans. The unique structure, dynamism, and utility of cognitive jigs makes them an ideal tool for solving problems in an increasingly VUCA world. Jigs are molecular-level, content-agnostic structures that can be applied to any domain or problem because they are built on a foundation of the atomic structures and elements of DSRP. When compared to content-heavy frameworks, jigs are more accessible, applicable, and agile. The unique dynamism of cognitive jigs, borne of their modular, fractal, content-free, adaptive, structure, make them imminently useful in solving problems in such a way where the tool fits the problem rather than the problem being *shoehorned* to fit the tool. New jigs are discoverable. We have provided herein an inventory of known jigs (N=44), but we suspect there are at least dozens more, if not hundreds. This paper lays down a foundation for the future search and discovery, organization and development of jigs as powerful systemic tools.

**Keywords:** cognitive jigs | molecular structures | systems thinking | DSRP | atomic structures | frameworks | problem solving | critical thinking | creative thinking | metacognition

## Contents



## 1. The Importance of Adaptive Mental Models to Solving VUCA Problems

The advice I used to give on how to approach systems thinking as a field in 2003 is dramatically different from what I would give today (2020).In an increasingly VUCA World— characterized by volatility, uncertainty, complexity and ambiguity—it is important that problem solvers, systems thinkers, innovators, policy wonks, business people, and the general public at large become capable of solving wicked or merely difficult problems. Only a minority of problems can be solved by off-the-shelf

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frameworks because the majority of problems we face require bespoke, customized models or "built-for-the-task-at-hand-models." Thus, we cannot rely on one-size-fits-all frameworks (e.g., SWOT Analysis, etc.) when tackling today's problems.

This means that the problem solvers toolkit must facilitate thinking that is adaptive, agile, flexible, and fluid. We must also identify the patterns in problem solving that help us avoid "recreating the wheel." The four underlying patterns of systems thinking, DSRP, provide universal atomic structures and elements(1) that are foundational to an adaptive approach. DSRP structures and their elements are the modular, fractal, recursive, simple rules that lead to the emergent property of bespoke models for targeted problems.

## 2. Systems Thinking c. 2000: DSRP + the MFS Universe

In 2003, I developed a concept called the Midgley, Francois, and Schwartz Universe or "MFS Universe"—a bounded universe of all of the nearly 5000+ different methods, concepts, and frameworks of systems thinking(2).

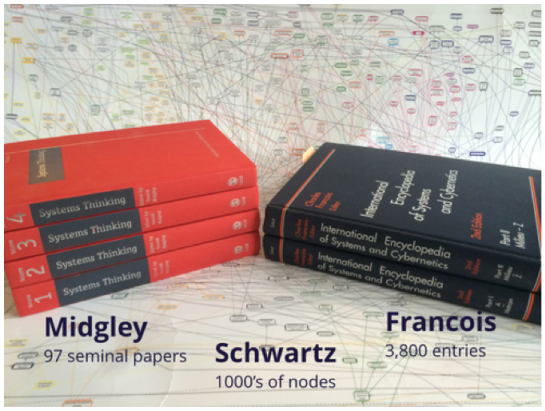


**Fig. 1.** The MFS Universe of over 5000 different methods, concepts, and frameworks of systems thinking

The notion of the MFS universe casts a wide net (or creates a "big tent") to include all of the pluralistic ideas of systems thinking. This facilitated the identification of universal patterns of thought and structure (i.e., DSRP) that underlie these systems concepts. At the time, if you had asked how does one undertake a study of systems thinking as a field and a practice, the answer would have included: (1) gain a deep understanding of DSRP, and (2) begin to explore (one by one) the multiple methods, frameworks, and ideas in the MFS Universe. At that time, the field resembled a funnel consisting of the nearly infinite number of possible systems problems and people, utilizing many frameworks in the MFS Universe, all of which were derived from universal atomistic structures (DSRP).

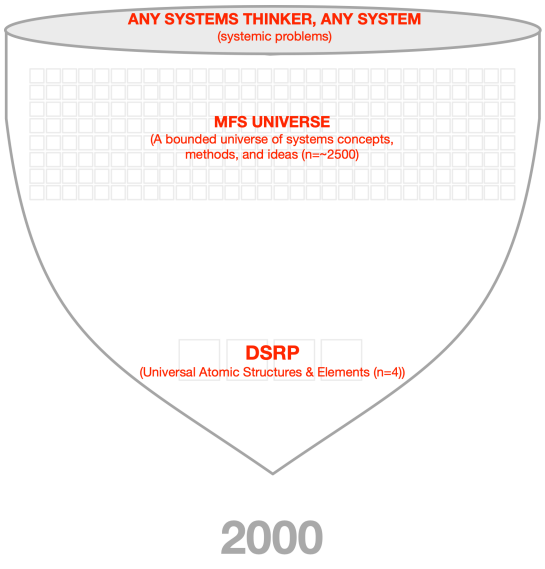


**Fig. 2.** Systems Thinking circa 2000: DSRP + the MFS Universe

## 3. Systems Thinking c. 2020: Jigs Displace the MFS Universe

Over the last 20 years, it's become apparent in theory, in research, and in practice (both our own and others') that the frameworks of the MFS Universe are not the go-to tool in most use cases. While there are committed minorities who use any one of these frameworks, the majority of people attack problems with either no-model at all, a combination of models, or by applying the cognitive skills and/or training in DSRP. Another powerful use-case is to utilize cognitive "jigs"—reusable, content-agnostic molecular structures—that can be mixed and matched to solve novel problems with bespoke models. In other words, rather than utilizing a single framework (say, for example SWOT Analysis, or SSM), many successful practitioners use deep first principles (DSRP) and jigs in their practice to address the problem at hand. This is in contrast to using a top-down approach where one chooses (or pre-chooses) a framework to attack a problem, because it is a bottom-up/top-down approach where one matches the problem to first-principles thinking (DSRP) and then builds the "tunnel from both ends." The result is a model, customized to the particular problem and bearing little to no resemblance to off-the-shelf frameworks. Today, in 2020, if asked me, how should I undertake a study of systems thinking as a field and a practice? The answer is: (1) gain a deep understanding of DSRP, and (2) begin to explore (one by one) the 44 known cognitive jigs.

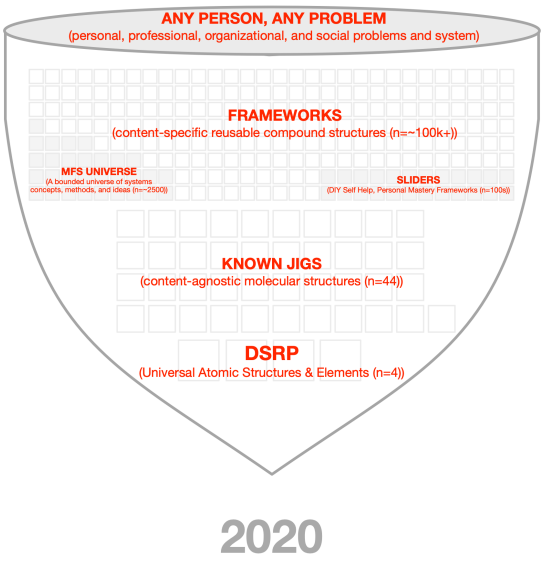


**Fig. 3.** Systems Thinking circa 2020: DSRP + Jigs and the displacement of Frameworks (MFS)

While the MFS Universe exists, and while numerous specific concepts and learnings can be beneficially accrued from it, the large-scale frameworks themselves (e.g., SD, SSM, VSM, CST, etc.) are almost over engineered for any given problem and lead to various biases such as *shoehorning effects*. This is why a new approach, reliant on underlying structures such as DSRP and cognitive jigs offer a more viable approach to the types of problems faced in a VUCA world.

## 4. Replacement versus Displacement

Displacement is used, not replacement, as jigs do not *replace* frameworks nor do they replace the MFS Universe. But they do *displace* them. The availability of jigs displaces the importance and overall utility of frameworks. That does not mean that frameworks are not useful and necessary–they absolutely are. Frameworks are especially good tools for very specific content areas. But they are also, by definition, less flexible. And, in a world where problems are more VUCA, the lack of agility can be debilitating. Frameworks are useful. For the field of systems thinking specifically, the frameworks that are part of the MFS Universe are important. But jigs displace their importance. Jigs make their importance and utility tertiary, rather than secondary. This means that the primary "go to" tool should be atomic structures and elements. The secondary "go to" should be molecular structures (Jigs). The tertiary "go to" is frameworks. This is different from what I concluded over 20 years ago, where frameworks were secondary.

## 5. Frameworks versus Jigs

This shift in thinking has taken 20 years and has been debated for the last 5 years or so. It is not taken lightly. At the same time, there are countless situations where a framework was used because of the sunken costs of the time involved in learning the framework. System Dynamics (SD) is a great example (or SSM, VSM, CST, for that matter). It takes some time to learn SD. It takes even more time to get good at implementing it. So, naturally people prefer to use the tools they have when a problem arises. But SD, which is great at solving for *population* models, isn't always the right tool for other types of problems. This leads to examples of poor implementation when only one aspect of SD fits the problem (usually feedback loops). Thus, when asked, the problem solver will say they used SD, but in reality they only used the concept of a feedback loop (which is a

jig!), only a small part of the SD approach. And, this example shows us that jigs are more versatile because they are lighter weight, more agile, more easily deployable.

Where SD provides a good example of how frameworks can be cumbersome, "preloaded" (every problem is a nail or shoehorning), or overengineered, SWOT is another great example of a framework that relies too much on specified content to be applicable. Many graduate students learn SWOT and feel obliged to use it. Occasionally it's the right tool for the job, but more often than not it leads shoehorning—trying to make a square framework fit into a round hole. Unlike SD (which is much more general and abstract), SWOT is extremely content-specific. SWOT is a more general framework that is not "heavy-duty" like SD. It is likely popular because it is simple, and specific in its content (i.e., Strengths, Weakness, Opportunities, and Costs). The issue is that these concepts can not be generally applied as a lens to nearly any situation. Yet, it is applied, over and over again, by generations of graduate students in policy and business. This, despite the fact that it is just one, extremely limiting perspective that frames every problem as a SWOT. SWOT's lightweight, low-sunk cost to high perceived reward (really the comfort of having done something) is what keeps it popular. It's specificity of content creates bias and makes it the king of all shoehorned frameworks. By the way, the 2x2 table on which SWOT is based? It's a jig!

These two examples —SD and SWOT— are good examples of why frameworks can be less effective in some situations and why more emphasis on Jigs is needed. There are numerous frameworks and the number will continue to grow. Table 1 provides an overview of the dimensions of difference between frameworks and jigs. Obviously, there are perhaps frameworks that buck the trends we mention below, but we would venture to conclude that if these frameworks exist, they are either the exception rather than the rule, or they are actually Jigs.

**Table 1. Dimensions of Difference Between Frameworks and Jigs**

| Dimension | Frameworks | Jigs |
|---|---|---|
| Modularity | Frameworks are not easily combined with one another (i.e., they often don't "play well with others")... | Jigs are modular in that they can be combined almost like Legos to create new, more elaborate and detailed mental models. |
| Content | Frameworks are by definition content-dependent rendering them less adaptable or agile. | Jigs are content-agnostic and can therefore be used for any problem or situation. |
| Off shelf vs Bespoke | Whereas frameworks promise off-the-shelf utility, they are often too content-dependent to be less flexible in how they can be implemented. | Jigs are, somewhat paradoxically, custom off-the-shelf tools. They are so basal that they fit the problem rather than fitting the problem to the model. They are wildly flexible. |
| Investment | Frameworks tend to have high resource, time, or learning costs... | Jigs are easy to learn, requiring fewer resources to use. They are "bite sized" and can be learned in a few minutes. Developing skills with jigs provides the right tool for the job. |
| Conflict | Frameworks have a tendency to be all-or-nothing... | Jigs are additive. Learning a new jig doesn't require getting rid of an older one. |
| Shoehorning Bias | Frameworks can often bias the situation or the way the problem is framed (sometimes limiting the solution set)... | Jigs are small and modular so they can mix and match to create on-the-fly frameworks that fit the problem (i.e., model fits problem rather than problem fits model). |
| Epistemology | Frameworks tend to be epistemologically grounded or paradigmatically situated and/or cumbersome... | Jigs are not paradigmatic. They do not require paradigmatic, philosophical, or epistemological "buy in" prior to their use. Jigs are ultimately pragmatic tools with little "excess epistemic baggage." |
| Bulk (weight) | Some frameworks are heavy, overengineered, and cumbersome.... | Jigs are simple and easy to use. |
| Mind and Nature | Frameworks may or may not exist in nature because they are often conceptual heuristics... | The stripped-bare structure of jigs may often be parallelism in mind and nature. |
| Loading | Whereas frameworks tend to be preloaded (people come to the problem with training in frameworks) in part because they require time and learning commitment... | Jigs tend to be post-loaded. They arise as valuable or useful if and only if the problem or situation warrants it. |
| Growth algorithm | There is an incentive for the number of frameworks to multiply and compete (causing solos and warring camps)... | Jigs are a relatively finite set for which membership is governed by a strict definition. Rather than being invented, Jigs are discovered. Many newly discovered Jigs have been in use for thousands of years without having been identified. While the number of known jigs (currently 44) may grow, unlike frameworks, the total is likely in the hundreds, not infinite. |

## 6. The Power of Jigs

If you want to understand the potential and power of Jigs, ask yourself these questions:

1. How often do you use metaphors, analogies and similes?
2. When and where did you learn these ways of thinking?
3. What would it be like if you couldn't think in these ways?
4. How difficult would it be to explain things to people if you didn't have names for them (analogies, metaphors and similes)?

5. What if there were dozens more (if not hundreds) equally useful structures that no one has ever taught you about or had given names to?

First, all humans use metaphors, analogies and similes a lot. Some cognitive scientists(3, 4) propose that there is evidence of their universal usage. That is, humans use them constantly. Second, these conceptual structures are taught invariably in grade school or even earlier. For question #3, it would be difficult to imagine a world in which humans did not use such structures to understand things and navigate the environment. Question #4, tells us that many of these structures would have to be used even if they had no explicit names and we were not conscious of their use. However, being aware of their use and being able to reference them by name makes things much easier. Imagine if, like Shakespeare did, you mentioned to your friend that the "World is a Stage" and they wouldn't stop arguing with you that the world is, in fact, not a stage. Without the concept of a metaphor things that should not be taken literally, but still convey great meaning and importance, would be taken literally. Finally, the answer to question 5 articulates the importance of becoming aware of jigs, developing mastery of known jigs, and advocating for the discovery of new jigs.

## 7. What is a Jig?

What is a Jig? We extend the dictionary terms, that include physical jigs, a type of dance, a trick or game, and fishing and mining techniques to offer a new type of jig - a cognitive jig. The following definition is a good start.

> **jig** /jig/ *n.*
> **1** [*physical jigs*] A device that holds a piece of work and guides the tools operating it in order to provide repeatability, accuracy, and interchangeability in the manufacturing of products. A jig is often confused with a fixture; a fixture holds the work in a fixed location. A device that does both functions (holding the work and guiding a tool) is called a jig. Jigs or templates have been known long before the industrial age. There are many types of jigs, and each one is custom-tailored to do a specific job. Jigs are a form of template in that they can be a shaped piece of metal, wood, card, plastic, or other material used as a pattern for processes such as painting, cutting out, shaping, or drilling. Jigs therefore serve as a model for others to copy.
>
> **2** [*cognitive jigs*] A common conceptual structure or templatic mental model that can be used and reused for a particular cognitive purpose in order to provide repeatability, accuracy, and interchangeability in cognitive tasks. Cognitive Jigs are, to a large extent, content or information agnostic, meaning that any given jig could be used for a variety of cognitive tasks or across a variety of topical areas. Cognitive jigs allow us to not have to "reinvent the wheel" when performing common cognitive tasks.
>
> *ORIGIN*: The term jig is mid-16th century and of unknown origin; the term *cognitive jig* was coined by Derek Cabrera to communicate the practical and tactile use of cognitive jigs as a way to identify, use, and reuse cognitive patterns (mental models) that are common or repeatedly used. Cabrera gives various discovered jigs common, basic, and memorable names such as "Barbells," "P-circles," "R-channels," and "Part-parties." Analogies, similes, and metaphors are cognitive jigs. To date, 44 cognitive jigs have been formally identified, but Cabrera estimates there are hundreds more. Cabrera identifies the degree of content-agnosticism of a jig as an indicator of its universality. The more a jig is content agnostic, the more universal it is, and perhaps the more difficult it is to discover(**?** ).

Jigs are reusable structures of knowledge and thinking that increase cognitive efficiency. Think of a jig as a common conceptual template that can be used over and over again in your thinking. Where did the term "jig" come from? A jig refers to "a device that holds a piece of work and guides the tools operating on it." Carpenters use jigs all the time to do repeated operations that would otherwise (without the jig) take a lot of time and effort (see Figure 4). Jigs are very practical because they save cognitive time and effort.

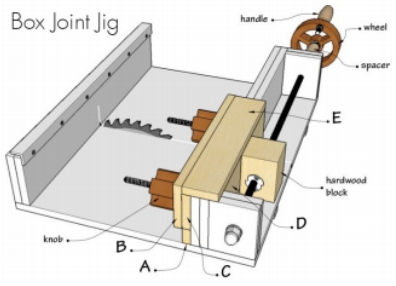


**Fig. 4.** A Box joint jig used by carpenters to streamline the creation of complex joints

## 8. You've Already Been Using Jigs for a Long Time.

You are already familiar with jigs even if you are new to the term. Here are three common jigs you are already familiar with:

**(1) Metaphor Jig:** We are making a metaphor when we when we say that A is something it is literally not, as in *A is B* or *All the world is a stage*(5). Figure 5 illustrates this structure which (as we explain in more detail later) can also be rendered in DSRP Script like this: O—O

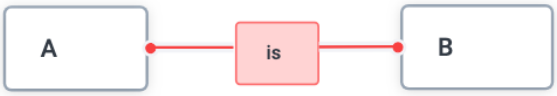


**Fig. 5.** Metaphor Jig

**(2) Simile Jig:** A simile is saying that A *is like* B, not literally the same as B. Figure 6 illustrates this structure which can also be rendered in DSRP Script like this: O—O. Note how the structure and content information in a jig can be either content-specific (red) or content-agnostic (black) and also note that even a subtle change to the information (or structure) of a jig can dramatically change its meaning. For example, the difference between a metaphor and a simile is a small change to the information in the relationship from *is* to *is like*.


**Fig. 6.** Simile Jig

**(3) Analogy Jig:** Like metaphors and similes, an analogy is not entirely content-agnostic because the primary relationship is content-specific and defined (*is like*), whereas everything else about the structure is variable and can take any content. Figure 7 illustrates this structure which can also be rendered in DSRP Script like this: (O—O)—(O—O)

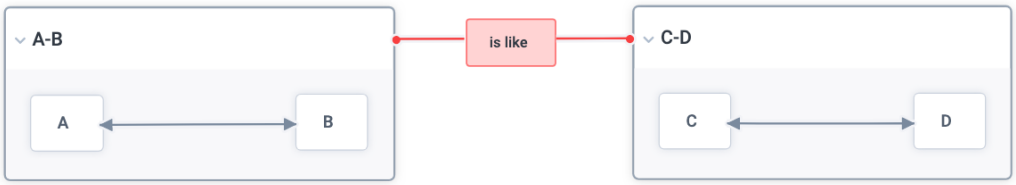


**Fig. 7.** Analogy Jig

Speaking of similes, universal jigs are like the Elements in the Periodic Table of Elements (chemistry) in that the initial ones are relatively easy to identify. But as more are identified it becomes more and more difficult. There are currently 44 known jigs identified in the Table of Known Jigs, but there are likely dozens or hundreds more. Discovering a new universal jig is difficult because it means that the jig is almost entirely or entirely content-agnostic and even when a jig has relatively small amount of specified content (as in the case of metaphors, similes and analogies) that content is extremely general in nature (e.g., the content includes general terms such as “is,” “like,” “similar to,” etc). For example, it would be hard to imagine a universal jig with content-specificity the likes of [to name a few random but specific things]: “biology,” “Texas,” “Strengths and Weaknesses,” "zebra," or “Engineering Department”. So Jigs not only have relatively low levels of specified-content, but even in the rare cases when the content is specified, it is extremely general.

## 9. Table of Known Jigs

In the Table of Known Jigs (Figure 8), jigs are organized according to their Content Agnostic Ratio (CAR) number (ascending from right to left) and also by their “atomic number” or Explicit DSRP number (ascending from top to bottom).

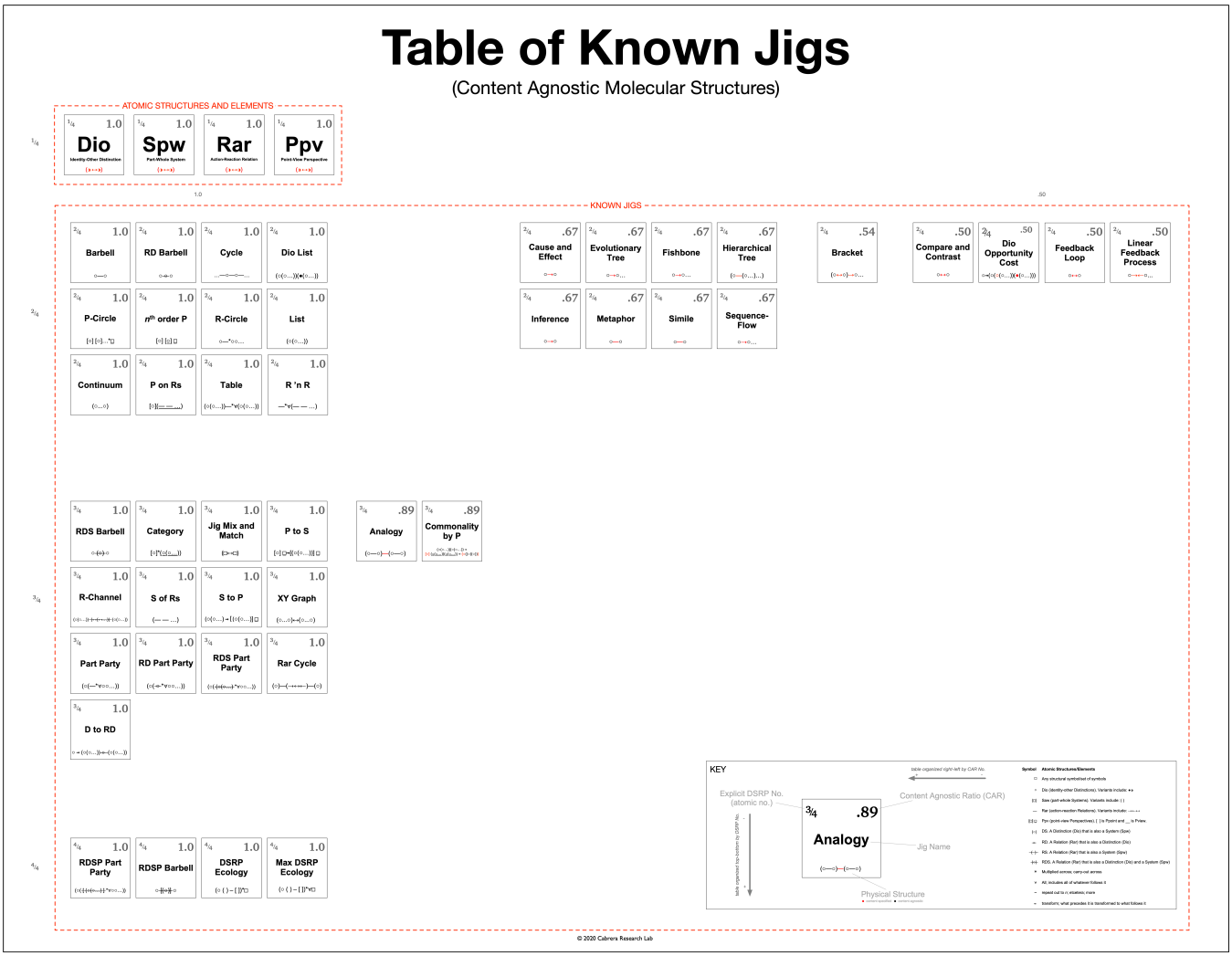


**Fig. 8.** Table of Known Jigs

The CAR number is calculated by a ratio of a simple count of the *minimal number of identified objects in the jig* (denominator) and the *number of these objects with specified content that cannot be altered without altering the jig* (numerator), reported as a decimal number. The generalizability of the content is also considered in determining a jig. The highest CAR number is 1.0 which means that 100% of the jig is content agnostic. The Atomic Number of a jig is based on the number of Atomic Structures (DSRP) that are explicit in the jig (i.e., those that can be readily seen in a structural mapping of the jig). Atomic number is reported as a fraction of the number of explicit Atomic Structures (numerator) over the total number of Atomic Structures (denominator), which is always 4. Thus, if a structure has an atomic number of 1/4 then it is merely the atomic structure itself and therefore not technically a jig (these are signified in the top left corner of the Table of Known Jigs) and shown in Figure 9.

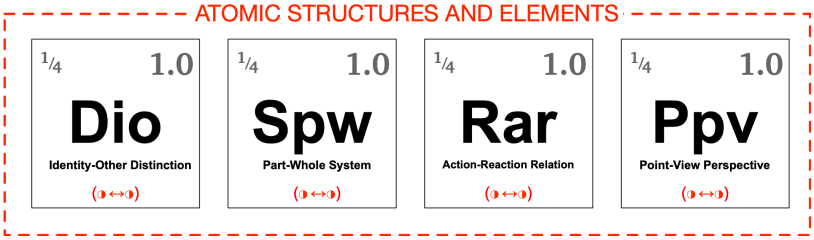


**Fig. 9.** Atomic Structures and Elements

Thus, known jigs can have Atomic Numbers of 2/4, 3/4, or 4/4. All jigs have a short name. They also have a physical structure diagram using DSRP Scripting Language. Jigs are mapped using the DSRP Mapping Language (demonstrated in

Plectica Software). A key (Figure 10) provides the information needed to read the Table of Known Jigs and the summary detail for each individual jig.

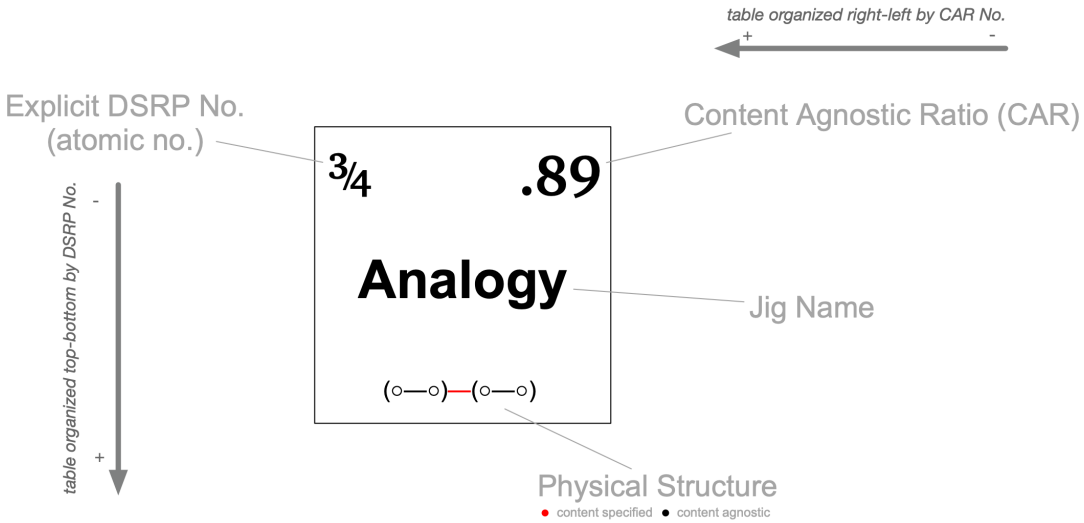


**Fig. 10.** Key for Reading Table of Known Jigs

## 10. DSRP Script

DSRP Script is a symbolic scripting language that has several advantages. Unlike DSRP Maps, which are nonlinear, DSRP Script allows the user to create a string of characters that mimics the structure of DSRP Maps. In addition, DSRP Script allows users to quickly detail the structure of a mental model (especially jigs) using only the symbols available on any keyboard. Table 2 lists the elements of the DSRP Scripting grammar. Certain symbols in the script are attained using strikethrough (command + shift + x) or underline (command + u). The □, ○, ∀, and ⇝ symbols are special characters. Each of the elements of DSRP Script can be combined to form various structural operations.

**Table 2. Dimensions of Difference Between Frameworks and Jigs**

| Symbol | Atomic Structure/Element |
|---|---|
| □ | Any structural symbol/set of symbols |
| ○ | Dio (identity-other Distinctions). Variants include: ● |
| ◑ | Only used for the Atomic Structures to indicate the dual-nature of the elements. |
| (□) | Spw (part-whole Systems). Variants include: ( ) |
| — | Rar (action-reaction Relations). Variants include: ←→↔ |
| [□]□ | Ppv (point-view Perspectives). [ ] is Ppoint and _ is Pview. |
| (○) | DS. A Distinction (Dio) that is also a System (Spw) |
| ~~○~~ | RD. A Relation (Rar) that is also a Distinction (Dio) |
| ~~( )~~ | RS. A Relation (Rar) that is also a System (Spw) |
| ~~(○)~~ | RDS. A Relation (Rar) that is also a Distinction (Dio) and a System (Spw) |
| ~~[(○)]~~ | RDSP. A Relation (Rar) that is a Distinction (Dio), a System (Spw), and a Perspective (Ppv) |
| * | Multiplied across; carry-out across |
| ∀ | All; includes all of whatever follows it |
| . . . | repeat out to n; etcetera; more |
| ⇝ | transform; what precedes it is transformed to what follows it |
| red | Content-specified |
| black | Content-agnostic |

For example, the structural formula for an analogy jig is: (○—○)—(○—○) which simple says that there are two related elements forming two systems ( (○—○) and (○—○) ) that are themselves related by a content-specified relationship (in this case the — signifies the content "is similar to"). Figure 11 illustrates how to read an entry in the Table of Known Jigs and how the Atomic No., CAR No., and Structural Map is created for the Analogy Jig. For example, (1) the structural map can be read as follows: "Two systems...each made up of two related parts...are themselves related by the specific relation 'is like'." (2) In order to identify the CAR number, one merely counts the elements of the analogy jig's structure revealing that there are 9 structures, and only one of which is content-specified. So the CAR number is 8/9ths or 0.89. (3) Likewise, the Atomic Number can be ascertained by counting up the explicit (visible) instances of Ds, Ss, Rs, and Ps. We see in the Analogy Jig that there are visible Ds, Ss, and Ps, but no visible Ps. Thus, the Atomic Number of the Analogy Jig is $DSR/DSRP$ or 3/4.

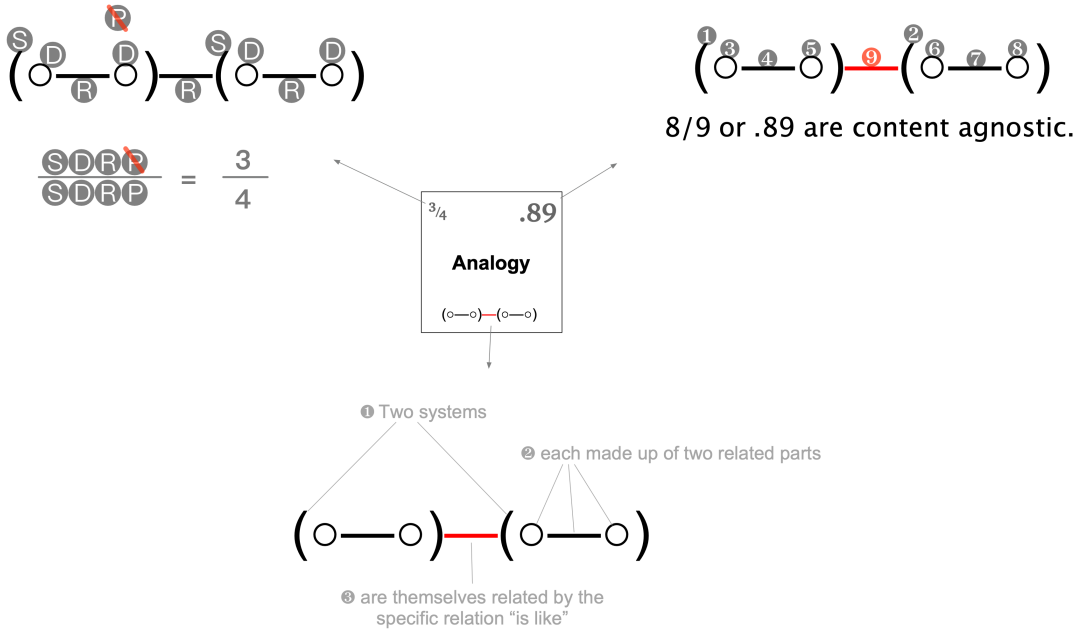


**Fig. 11.** The Meaning of an Entry in the Table of Known Jigs

Another example will perhaps further elaborate how the structural mapping works. A P-circle Jig identifies any number of Perspectives on any given situation, phenomenon, or system. The structural formula for P-Circle Jig is [○] [○]. . . *□. This structure elucidates that a P-Circle Jig involves two or more distinctions that are acting as points-of-view ([○] [○]) and there could be as many more as desired to *n* (...). These points are *applied across* (*) any chosen structure (□). In this case the □ represents any of the DSRP structures containing any content whatsoever and the underlining (□) represents that whatever is underlined is the view from the point(s). Note that the structural formula for the P-Circle Jig, unlike that of the Analogy Jig, does not show any of the symbols in red. This means that the structure is entirely content-agnostic. It makes no difference what content one puts into the jig. In fact, the jig could accept entirely randomized content. This is one of the chief defining features of Jigs—that their Content Agnosticism Ratio (CAR) is quite high (especially given the general nature of any specified content) and therefore that the structure is universal.

## 11. Glossary of Known Jigs

There are currently 44 known jigs* as shown in Table 3.

**Table 3. Glossary of Known Jigs**

| Jig Name | Structure | Atomic No. | CAR No. | Description |
|---|---|---|---|---|
| Compare and Contrast | ○↔○ | 2/4 | 0.50 | A common jig that helps us to Distinguish how things are different and/or the same by using compare/contrast relationships. See map. |
| Dio Opportunity Cost | (○(○ . . .))(●(○ . . .)) | 2/4 | 0.50 | Dio means Distinction and its two elements identity and other. In this alternative case, you are thinking more about the "o" that occurs when you decide the "i". This jig identifies the "opportunity cost" of making a distinction. See map. |
| Feedback Loop | ○ ↔ ○ | 2/4 | 0.50 | A popular variation on Cycle Systems where 2 or more identities are relating in such a way as to alter each other in feedback. See map. |
| Linear Feedback Process | ○ →← ○, . . . | 2/4 | 0.50 | A jig that illustrates a linear process of related elements in which each successive element exhibits feedback to some or all previous elements. See map. |
| Bracket | (○↔○)→○, . . . | 2/4 | 0.54 | A Bracket Diagram used in many sporting events. See map. |

*The process for identifying jigs is to determine its CAR and Atomic numbers. Currently Cabrera Research Lab (CRL) maintains the glossary and table of known jigs. If a new jig is thought to have been discovered, contact hub@cabreraresearch.org and CRL will: (1) confirm it, (2) award the Universal Jig Prize to its discoverer, (3) assign their name to the discovery of the jig, and (4) add it to the Table of Known Jigs and Glossary of Jigs.

| Jig Name | Structure | Atomic No. | CAR No. | Description |
|---|---|---|---|---|
| Cause-Effect | ○→○ | 2/4 | 0.67 | An often used and familiar jig establish a related cause and effect. Read more. |
| Evolutionary Tree | ○→○,... | 2/4 | 0.67 | A linear tree with branches showing the relationships between predecessors and successors. See map. |
| Fishbone | ○→○,... | 2/4 | 0.67 | Also called an Ishikawa Diagram or a cause and effect diagram, is a jig for distinguishing the potential causes of a problem in order to identify its root causes.Read more. |
| Hierarchical Tree | (○–(○,...),...) | 2/4 | 0.67 | A hierarchical tree is quite similar to a bracket diagram but red top-bottom rather than left-right. Read more. |
| Inference | ○→○ | 2/4 | 0.67 | A conclusion reached on the basis of evidence and reasoning. See map. |
| Metaphor | ○–○ | 2/4 | 0.67 | Note that a slight change in the fixed information can change the jig from a metaphor to a simile. Read more. |
| Simile | ○–○ | 2/4 | 0.67 | Note how some of the information or structure of a jig can be either variable or fixed. Read more. |
| Sequence-Flow Map | ○→○,... | 2/4 | 0.67 | A linear sequence of identities and relationships (like a number line). A variation on the sequence/flow jig involves variables that are plotted over time or in stepwise relation to each other but that can include multiple levels or scales and identities can have parts (S). Flow maps can be entirely linear, or contain feedback and the variables themselves can contain parts. See map. |
| Dio List | (○(○...))(●(○...)) | 2/4 | 1.00 | Dio means Distinction and its two elements identity and other. You're making a list of the two elements. Very helpful in defining things at a basic level. See map. |
| RD Barbell | ○–⊖–○ | 2/4 | 1.00 | A barbell where the Relationship (R), is also a Distinction (D). (See Barbell Jig and RDS Barbell). Read more. |
| Cycle | ...—○—○—... | 2/4 | 1.00 | A set of 2 or more identities that are related in a circle (e.g., a feedback loop; a cycle, etc.). See map. |
| Continuum | (○...○) | 2/4 | 1.00 | A continuum jig is used to plot a few options (usually 2, 3, 4) "along a continuum." It should be noted that there is always at least an implicit organizing perspective that creates the continuum (from X to Y, Less A, More B, etc). See map. |
| List | (○(○...)) | 2/4 | 1.00 | A list is a very well-known and popular jig that allows for a part-whole itemization. Read more. |
| P-circle | [○] [○]...*□ | 2/4 | 1.00 | The "Perspective Circle" Jig: A simple common structure that looks at a view from multiple points. Create a circle of perspectives around any item, situation, event, or system. Read more. |
| nth-order P | ...[○][○]□ | 2/4 | 1.00 | A common structure that helps us see our bias in looking at a perspective. Sometimes it is important to look at a perspective on a system from a second-order perspective or an nth-order perspective. See map. |
| R-circle | ○—*○○... | 2/4 | 1.00 | An R circle is just a bunch of variables relating in some way to a center variable. The Rs could be causal or not. Often used to map webs of causality in relation to some effect. See map. |
| Table | (○) ∀*↔*∀ (○) | 2/4 | 1.00 | A part-whole jig consisting of a square grid of parts. Read more. |
| Barbell | ○—○ | 2/4 | 1.00 | A simple common structure that helps us zoom into the relationship between two things. Named after a "barbell" because of its structure. Read more. |
| R'n R | —*(—,—) | 2/4 | 1.00 | R'n R Jig or Relate the Relations Jig makes relationships between a set of relationships. See map. |
| P on Rs | [○](— — ...) | 2/4 | 1.00 | P on Rs Jig takes a perspective on a set of Relations. See map. |

| Jig Name | Structure | Atomic No. | CAR No. | Description |
|---|---|---|---|---|
| Analogy | (○—○)—(○—○) | 3/4 | 0.89 | Note how some of the information or structure of a jig can be either variable or fixed. Read more. |
| Commonality by P | ○● ⇝ [○](○)(●) ⇝ (○(○○)) | 3/4 | 0.89 | a.k.a. Fruit jig because when a situation gives you apples and oranges (i.e., incompatibilities) sometimes you have to look for the common whole which is born of the common part(s). See map. |
| RDS Barbell | ○ (○) ○ | 3/4 | 1.00 | A barbell where the Relationship (R) is also a Distinction (D) and a System (S). Read more. |
| Category | [○](○) | 3/4 | 1.00 | A popular and problematic jig because of its mass use usually involves leaving the perspective explicit, giving the false impression that thing are fixed in their groupings. Read more. |
| Jig Mix and Match | (□ ↔ □) | 3/4 | 1.00 | A jig that allows you to mix and match other jigs to make new compound jigs. Very powerful. Read more. |
| P to S | [○] □ ⇝ [(○)] □ | 3/4 | 1.00 | A jig to help avoid the bias of homogeneous perspectives of groups (or an individual). Rather than turning an S into a P like in S-to-P jig, you're turning a P into an S. See map. |
| R-channel | (○(○ . . .)) (↔(↔ . . .)) (○(○ . . .)) | 3/4 | 1.00 | A simple structure that can be used to compare the relationships between two systems made up of parts. Any time you want to relate two systems, an R-channel is the jig for you. It's called an R-channel because the structure of the jig "opens up a channel of space" in the middle to create many relationships across the systems. Read more. |
| S of Rs | (— — . . .) | 3/4 | 1.00 | System of Relationships Jig (S of Rs): An important jig where a set of relationships (Rs) are seen as working as a system (S). Read more. |
| S to P | ( )⇝ [( )]□ | 3/4 | 1.00 | S to P Jig (System to Perspective): A common structure jig where a system of related parts (a part party) is transformed into a perspective that can be used to look at a problem, situation or phenomenon differently. Could also be called, S to P on an S Jig because this jig is a great way to solve a problem and use an understanding of the system you are analyzing to abstract an overarching lens to be used in future evolutions of the current problem system or future systems. Read more. |
| XY Graph | (○ . . . ○)∀ ↔ ∀(○ . . . ○) | 3/4 | 1.00 | A Cartesian Graph. A well-known and often used jig that combines two Continuum Jigs with a system of parts plotted on each axis. (btw it takes two continuum jogs to make an XY Jig). Read more. |
| Part Party | —*∀(○, ○) | 3/4 | 1.00 | Standard Part Party: A Jig that helps us to relate the parts of a whole. Like a good party, the parts need to interact. A pervasive jig of all complex systems. Any good party involves interactions between the guests. Cognitive systems are no different–the parts must "part-ay." Read more. |
| RD Part Party | ○ *∀(—) | 3/4 | 1.00 | A Jig that helps us to distinguish and relate the parts of a whole. (See Standard Part Party Jig). Read more. |
| RDS Part Party | (○) *∀(—) | 3/4 | 1.00 | A Jig that helps us to distinguish and relate the parts of a whole. (See Standard Part Party Jig). Read more. |
| Rar Cycle | (○)—(→↔←)—(○) | 3/4 | 1.00 | Rar Jig is a composite of things you can do with the most basic elements (action-reaction) of Relationships (R). It is a very powerful set of jigs that can be used to zoom into what is really going on when two or more things relate. Rar zooms into the dynamics of any Rs but especially psychotherapeutic or CBT (stimulus-response, etc). Read more. |

| Jig Name | Structure | Atomic No. | CAR No. | Description |
|---|---|---|---|---|
| D to RD | ○ ⇝ □–○–□, . . . | 3/4 | 1.00 | Take an identity and transform it into a Relation and then ask all the things it relates as a barbell between two Ss. See map. |
| RDSP Barbell | ○–[(○)]–○ | 4/4 | 1.00 | Add P to the R on an RDS Barbell. Read more. |
| RDSP Part Party | –[(○)]–*∀(—) | 4/4 | 1.00 | Add P to the R on all the RDS Barbells between parts in the S. Read more. |
| DSRP Ecology | (○ ( ) – [ ])*□ | 4/4 | 1.00 | The Basic DSRP Ecology Jig: A jig, like ecology jig that explicates DSRP structure relatively consistently across all elements. See map. |
| Max DSRP Ecology | (○ ( ) – [ ])*∀□ | 4/4 | 1.00 | The Max DSRP Ecology Jig: A jig where every element in the network is also a perspective ON the network.Read more. |

## 12. Conclusion

The unique structure, dynamism, and utility of jigs makes them an ideal tool for solving the problems in an increasingly VUCA world. When compared to frameworks, jigs are more accessible, applicable and agile – and thus characterized by flexibility and adaptivity. Jigs are molecular-level, content-agnostic structures that can be applied to any domain or problem because they are built on a foundation of the atomic structures and elements of DSRP. Jigs are discoverable. We have provided herein the first discovered jigs (N=44), but we suspect there are at least dozens more, if not hundreds. This paper lays down a foundation for the future search and discovery and development of jigs as powerful systemic tools.

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