

The Houses of Creativity: An Integrated Framework of the Creative Process in Honeycomb

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ABSTRACT

Wallas' (1926) model, *The Art of Thought*, is the most popular model of the creative process, coexisting with other later models. It encompasses only cognitive processes: preparation, incubation, illumination, and verification, within a limited stage of the process, excluding other crucial non-mental activities, such as the materialization of the idea or its communication. The 25 models of the creative process analyzed in this study apply a linear temporal framework to a process that is inherently non-linear. The most popular tests and programs to evaluate and enhance creativity primarily intervene in the ideation stage, and by ignoring other parts of the creative process, they are not effective. Unlike previous models, The Houses of Creativity identify the phases with a conceptual rather than a temporal criterion, structured in a honeycomb pattern, addressing the non-linearity of the process. Additionally, its phases apply not only to creative production but to all tasks susceptible to the process. It includes: **supermarket** (selecting), **temple** (observing, perceiving, questioning), **library** (informing), **cabin** (ideating), **bar** (distracting and socializing), **ware-**

house (stockpiling), **hobby house** (enjoying), **laboratory** (developing and verifying), and **gallery** (communicating and convincing). A person who is only good at ideation in the cabin (according to Torrance tests) will not be able to successfully complete the creative process. This theoretical research could pave the way for developing personalized tools to assess and enhance creativity, or to form interdisciplinary teams that incorporate them.

KEYWORDS:

creativity theory, process framework, creativity process, honeycomb, Wallas, creativity model

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INTRODUCTION

Existing models of creative processes present certain conceptual issues and offer a partial view of the process. The most popular creativity tests and enhancement programs primarily focus on specific cognitive skills related to only one or a few phases of the creative process. These challenges are described below as triggers for the development of The Houses of Creativity framework.

For this study, **creativity** is defined as a quality that depends on the capacity and attitude to do something new, capable of providing value or emotion (Corcuera & Benito, 2021); **creative process** is defined as the sequence of thoughts (mental) and actions (non-mental) that leads to novel, adaptive productions (Guilford, 1950); **creative development** is defined as the practical application of the creative process in a specific production; and **creative productions** are defined as the outcomes or products generated by creative developments, whether an idea, process, or physical object (Gruszka & Tang, 2017).

The problems with the models of the creative process

Wallas' (1926) model *The Art of Creative Thinking* has been established as the conceptual anchor for describing the creative **process** by a large part of researchers up to our days (Csikszentmihaly & Sawyer, 1995; Howard et al., 2008; Sadler-Smith, 2015). It includes four stages: preparation, incubation, illumination, and verification. *Preparation* is the stage of conscious, systematic thought, and fruitless analysis of the problem, which is investigated from all its facets. Incubation is the stage in which one does not voluntarily or consciously think about that problem. *Illumination* is the stage of thought when the happy idea appears in a conscious, sudden, and immediately certain manner. *Verification* is the conscious stage of thought in which the idea or conclusions are validated and their exact form is mentally constructed (Wallas, 1926). Wallas describes the process of creative thinking in its restrictive phase of providing a valid, exclusively mental solution to an already known problem, which ignores the relevance of the preceding and subsequent stages of the entire creative process. Wallas does not claim to describe the creative process. It could be argued that researchers, by assuming Wallas' model as the creative process, have taken a small part for the whole in a kind of synecdoche. Amabile (2019) and Lubart (2001) question its validity as the model of the creative process. To describe, evaluate, and improve a process, it is necessary to accurately identify its stages and the inherent characteristics of each of them (Fürst et al., 2012; Lubart, 2001), not just those that apply to mental activities in a restrictive part of the creative process.

On the other hand, Howard et al. (2008) analyzed 19 models developed by researchers in the psychology domain. They created four major groupings, which arguably represent the major phases of a creative process: analysis, idea generation, evaluation, and communication/implementation. Ultimately, they reduce the creative process to mental phases and relegate the communication/implementation phase to the engineering design process, even though it produces both routine and creative products.

There are three conceptual problems in most preceding models of creative processes:

- The first is the fixation of time as a criterion for defining process phases, which typically begins with preparation and ends with evaluation, in a linear graphical layout, whereas creative development is not linear. To address this issue, some authors add that the process is iterative and nonlinear (Csikszentmihalyi, 1990; Haase et al., 2023; Sawyer, 2021).
- The second problem is the orientation of phases solely towards creative production when they also apply to other stages. In traditional creative processes, for example, the evaluation phase, like others, only refers to creative ideas (Wallas, 1926) or creative productions, but in creative developments, knowledge and materials to be used, methods for evaluating the product, or ways to communicate the creative production are also evaluated.
- The third is the exclusion of non-cognitive phases and also phases that are not directly related to creative production, such as enjoying oneself and social distraction.

The Houses of Creativity identify the phases with a conceptual rather than a temporal criterion, structured in a honeycomb pattern, addressing the non-linearity of the process. Additionally, its phases apply not only to creative production but to all tasks susceptible to the process. It includes: **Supermarket** (selecting), **Temple** (observing, perceiving, questioning), **Library** (informing), **Cabin** (ideating), **Bar** (distracting and socializing), **Warehouse** (stockpiling), **Hobby House** (enjoying), **Laboratory** (developing and verifying), and **Gallery** (communicating and convincing).

Table 1 presents 19 creative process models categorized by Howard et al. (2008), supplemented by additional models from Sawyer (2021). Furthermore, a legend is included that assigns a specific color to each House of Creativity, reflecting an action typology for the present framework. An effort is then made to correlate the phases in The Houses of Creativity framework with those outlined in the other models.

When attempting to relate phases between models that adopt a temporal perspective and The Houses of Creativity, challenges arise due to the fact that the phases of the former can encompass multiple actions within a single phase. For instance, some authors, in their descriptions of problem finding, include actions such as questioning, selecting, and searching for information, which correspond to three different houses in The Houses of Creativity framework.

Defining a model through generic action typologies, such as The Houses of Creativity, may facilitate a more thorough analysis of the cognitive and conative traits involved, thereby opening avenues for improving the assessment and improvement of creativity in individuals.

A chronological analysis of the evolution of these models reveals a growing interest among authors in the houses of distraction (Bar and Hobby House). Moreover, it is noteworthy that only one-third of the authors consider communication to be a stage within the creative process. Lastly, I acknowledge that I have associated the Temple (questioning) with the phases of problem finding. However, the authors place greater emphasis on delineating the problem, which may align more closely with the Supermarket (selection) rather than with the act of posing thought-provoking questions and challenging accepted knowledge.

Table 1. Correlations between the phases of The Houses of Creativity and other creative process models

THE HOUSE OF CREATIVITY															
SUPERMARKET	TEMPLE		LIBRARY		CABIN		LABORATORY		HOBBY HOUSE		BAR	WAREHOUSE	GALLERY		
Selection	Observing Perceiving Questioning		Informing oneself		Idea generation		Elaborating Verfyfing		Enjoying oneself		Social distraction	Stockpiling		Communicating Convincing	
Models	Analysis Phase					Generation Phase				Evaluation Phase	Communication/Implementation Phase				
(Helmholtz 1826)	Saturation					Incubation		Illumination		x	x				
(Dewey 1910)	A felt difficulty		Definition and location of difficulty			Develop some possible solutions				Implications of solutions through reasoning	Experience collaboration of conjectural solution				
(Wallas 1936)	Preparation					Incubation		Illumination		Verification	x				
(Kris 1952)	x					Inspiration				Elaboration	Communication				
(Polya 1957)	Understanding the Problem		Devising the Plan			Carrying out the Plan				Looking Back	x				
(Guilford 1957)	x					Divergence				Convergence	x				
(Buhl 1960)	Recognition	Definition	Preparation	Analysis		Synthesis				Evaluation	Presentation				
(Gordon 1961)	Groundwork		Immersion			Divergent exploration				Selection	Articulation of solution	Development and transfor- mation	Implemen- tation		
(Osborn 1963)	Fact-finding					Idea-finding				Solution- finding	x				
(Parnes 1967)	Problem, challenge, opportunity	Fact-finding	Problemfinding		Idea-finding				Solution- finding	Acceptance-finding	Action				
(Jones 1970)	Divergent					Transformation				Convergent	x				
	Search for data		Understand the Problem			Pattern finding		Flashes of Insight		Judgement					
(Stein 1974)	x					Hypothesis formulation				Hypothesis testing	Communication of results				
(Parnes 1981)	Mess Finding	Fact-finding	Problemfinding		Idea-finding				Solution- finding	Acceptance-finding					
(Amabile 1983)	Problem or task presenta- tion		Preparation			Response generation				Response Validation	Outcome				
(Barron et al. 1984)	x					Conception	Gestation	Parturition	x	Bring up the Baby					
(Brasford et al. 1984)	Identify problems, define goals	Learn	Look		Explore possible strategies				x	Act and anticipate outcomes					
(Isaksen et al. 1994)	Constructing Opportunities	Exploring Data	Framing Problem		Generating ideas				Developing Solutions	Building Acceptance	Appraising Tasks	Designing Process			
(Couger et al. 1993)	Opportunity, Delineation, Problem Definition		Compiling Information			Generating ideas				Evaluating, Prioritizing Ideas	Developing an Implementation Plan				
(Shneider- man 2000)	Collect					Create				Donate (Communicate)					
	Relate														
(Basadur et al. 2000)*	Problem Finding	Fact Finding	Problem Defn.		Idea Finding				Evaluate and Select	Plan	Acceptance	Action			
(Kryssanov et al. 2001)	Functional Requirements		Structural Requirements			Functional Solution		Analogies, Metaphors		Reinterpreta- tion	x				
(Kelly 2001)	Observation					Brainstorming					Rapid proto- typing	Refining	Implemen- tation		
(Scott et al. 2004)	Problem finding	Information gathering	Concept search		Idea generation		Conceptual combi- nation		Idea evaluation	Implementa- tion	Planning	Action monitoring			
(Sternberg 2006)	Redefine Problems		Know Domain			Take time off	Generate ideas	Cross-ferti- lize ideas	Judging ideas	Sell the idea		Perserve			
(Burnard et al. 2006)	Posing Questions		Immersion			Play		Being imaginative		x	Self determination				

The problem of creativity measurement tests

Lubart et al. (2013) assert that there are two ways to measure creative potential: the approach based on the production of creative works and the approach based on cognitive and conative resources through questionnaires and tasks. Currently, divergent thinking tests are probably the most commonly used measures of creative potential in creativity assessment (Runco et al., 2016; Zeng et al. 2011). In research by Long (2014) on methods of studying creativity, it was found that tests of divergent thinking and problem-solving tasks comprised half of the studies, with divergent thinking tests being predominant. The indices currently accepted as descriptors of divergent thinking are: *fluency* or quantity of relevant ideas, *flexibility* or quantity of categories to which responses belong, *originality* or quantity of unusual correct responses determined by statistical frequency, and *elaboration* or quantity of details for a response (Guilford, 1950). Divergent thinking tests present some issues. In this typology of tests, variations in testing conditions lead to different performances, possibly due to particular personality variables and task characteristics, such as difficulty or time constraints (Said-Metwaly, 2017). The correlations among fluency, flexibility, and originality were so high that each subscale could not provide meaningfully different information. (Chase, 1985; Clapham, 1998; Heausler & Thompson, 1988). For Runco and Jaeger (2012), originality is the key factor in creativity studies; however, Silvia et al. (2009) point out that scores on originality vary with sample size and Kim (2006) asserts that they also vary among different demographics over time because originality is culture-specific. These indices are also not capable of representing creativity in a specific domain, even though creativity is understood as a domain-specific construct (Said Metwaly et al., 2017). For Kim (2017), the Torrance tests only measure 4 out of the 27 conative traits of the creative personality. Zeng et al. (2011) argue that divergent thinking tests emphasize only the ideation phase and overlook such abilities as problem finding, analysis, evaluation, and implementation. They also conclude that current tests based on flexibility, originality, and elaboration are more valid for everyday creativity than for Big-C creativity. The Torrance Thinking Creative Test (TTCT) by Torrance (1966) is the most well-known and researched creativity test, with its international use being more widespread (Colangelo & Davis, 1997; Oliveira et al., 2009; Zeng et al. 2011). According to Torrance himself (1974), a high level of skill in his divergent thinking test does not guarantee that a person will behave creatively. Some authors like Barbot et al. (2016) develop assessment tools, where convergent thinking plays a significant role alongside divergent thinking. Zeng et al. (2011) suggest incorporating novelty and appropriateness as predominant criteria when evaluating final productions resulting from integrated creative thinking processes—rather than individual products from segmented cognitive phases—in which domain specificity is also integrated. Said Metwaly et al. (2017) point to the need for developing a consensus conception of creativity for its measurement.

The problem with creativity training programs

Among interventions, training has been the preferred, if not favored, approach for developing creativity (Montouri, 1992). Creativity training programs can be practical, grounded in creative thinking methodologies, such as Warren and Davis (1969), or based on lectures and talks like those by

Fontenot (1993). They can also be generic or focused on a specific domain like Baer's (1996). Bull et al. (1995) classified creativity programs taught in universities according to different approaches: cognitive, personality, motivational, and personal interaction. The so-called major creativity training programs generally have a cognitive foundation focused on improving ideation—fluency, flexibility, originality, and elaboration. Among them are Osborn's (1953) *Creative Problem Solving*, later redefined by Parnes (1967); Feldhusen's *Purdue Creative Thinking Program* from 1965 (Feldhusen et al., 1971); Torrance's (1995) *Ideabooks* developed with Myers; Khatena's *El Khatena Training Method* (Sikka, 1991); Covington, Cruchfield, Davies, and Olton's (Mayer, 2000) *Productive Thinking Program*; Renzulli's (1986) *New Directions in Creativity program*; Cropley and Patston's (2019) *Result Investigation Student and Environment*; De Bono's The Cognitive Research Trust (CoRT); and De Bono's (2008) *Six Thinking Hats*, among others.

Scott et al. (2004) found that training programs that involved cognitive skills were most effective. They argue that most creativity training emphasizes divergent thinking as the main focus. In one of their studies, they concluded, in agreement with Haase et al. (2023), that programs focusing on convergent thinking were more effective than those focusing on divergent thinking, perhaps because, as suggested by Cropley (2006), some forms of convergent thinking could be more trainable. Haase et al. (2023) further concluded that complex training courses, meditation, and cultural exposure were more effective than other interventions.

THE HOUSES OF CREATIVITY

The Houses of Creativity is an integrated framework of the creative process. Unlike previous models, it identifies the phases based on a conceptual rather than a temporal criterion, addressing the non-linearity of the process. The actions within its phases apply not only to creative production but also to all tasks susceptible to the process. Furthermore, it integrates the full range of phases from the analyzed prior models, encompassing both cognitive and non-cognitive phases.

Conceptual criterion

The Houses of Creativity model outlines the stages of the creative process, using conceptual abstraction to define criteria based on the typology of activities (mental, action, materialization, and knowledge) that occur in different 'houses,' rather than relying on temporal progression. In addition to this conceptual classification, the houses are interconnected based on the degree of objectivity or subjectivity associated with each action. Figure 1 presents the houses classified by concepts, grouped into diametrical pairs according to their level of subjectivity, along with a description of the actions that occur in each.

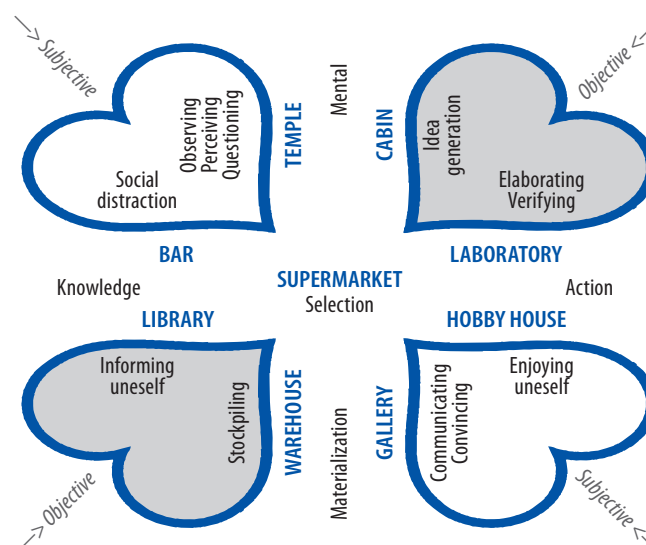


Figure 1. The Houses of Creativity'

The Houses in the Octahedral Creativity Framework

The Octahedral Creativity Framework (Corcuera, 2022) is an integrative framework of creativity that unifies preceding models of creativity with a global conceptual vision, forming a complete puzzle, where each theory fits perfectly. It is based on Rhodes' (1961) 4P framework of creativity with its four dimensions (person, process, press-environment, and product) on the horizontal plane, and two new dimensions on the upper and lower edges of the octahedron (motive and means). Additionally, the octahedron incorporates on its faces and edges factors from 25 other relevant creativity frameworks and theories, which are related to the adjacent dimensions.

The Houses of Creativity fit perfectly within the *Octahedral Creativity Framework*, as shown in Figure 2. The Library and the Bar represent universal **knowledge** and the most subjective input provided by our colleagues, respectively. The Temple and the Cabin shape **mental** representations that are subjectively questioned according to our concerns and are answered through ideation, respectively. The Laboratory and the Hobby House represent the objective **action** of the creative product and the subjective aspects that we are passionate about, respectively. The Warehouse and the Gallery represent **materialization** in terms of the objective components that integrate it and as the finished product affected by our subjectivity that is intended to be presented to the domain for acceptance. Finally, the Supermarket, a mental house, is the heart of creativity and relates to all the houses because it involves the wise and subjective **selection** of all the possibilities that occur in each of the houses. It is where creativity is chosen by selecting the risk one is willing to take. Another type of categorization could include social houses, such as the Bar and Gallery, or distraction houses, such as the Bar and Hobby House.

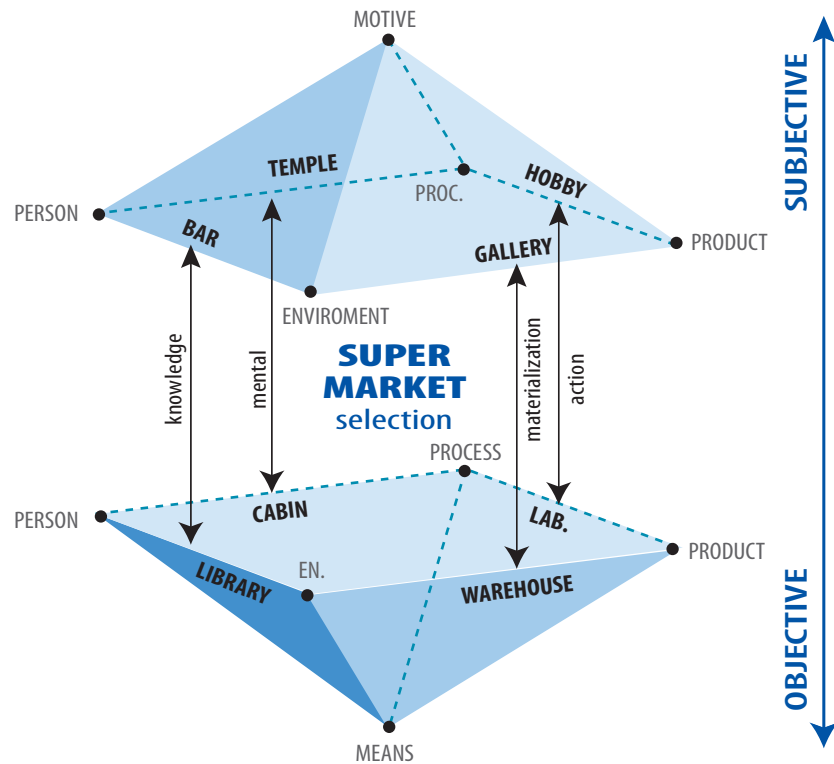


Figure 2. The Houses of Creativity in the Octahedral Creativity Framework

Temporal Journey of the Creative Process in The Houses of Creativity

Rački (2017) identifies three domains of creativity: everyday, scientific (technical), and artistic creativity (emotional). According to the 4 C's theory of creativity by Kaufman and Beghetto (2009), in Big-C and Pro-C creativity, approved value from the domain is required, while in mini-c or little-c creativity, emotion from the single creator or their immediate environment is essential.

One creative development can start from any of the houses. There is no single house through which creative development always begins or ends. It resembles more of a honeycomb structure with recurring improvised itinerant movements that are non-linear. One may be working in the Laboratory on another project and discover something that motivates them to start another development, and so on with all the houses. According to Corazza (2016), creative development can conclude successfully or inconclusively. In the case of Big-C and Pro-C, success can only be concluded from the Gallery when the creative production is presented to the domain. In the case of mini-c or little-c, success can also be achieved after the Laboratory when the creative production that evokes emotion in the creator is completed. The creator may abandon the process inconclusively from any of the houses at any time when they feel they cannot meet their expectations or when they consider the effort is not worthwhile relative to the benefit. Creators may encounter blocks at the beginning or during the creative process. To overcome these difficulties, the first step would be to **start** wherever one is, gather resources, and envision goals through small tasks gradually increasing in scope (plan), making small choices from a preliminary selection. Second, **maintaining**

positivity by focusing on progress made so far is recommended (Isen et al., 1987). Third, **changing houses** is advised. Initially, one could visit distraction houses to deactivate the current focus and gain a new perspective. The Bar provides another person's perspective, and the House of Hobbies offers a perspective from another domain. The Bar and the House of Hobbies are natural energy rechargers, as Csikszentmihalyi (1990) suggests that idleness precedes productive bursts. If one gets stuck in idleness at the Bar or the House of Hobbies, it is recommended to go to the Laboratory to review or rework the plan or to the house that is most motivating at that moment.

The nine Houses of Creativity are places that should be navigated to achieve any complete and optimal creative development. Some people feel comfortable in one of them and forget that the others are equally as important. The journey can be chaotic and improvised, as Sawyer (2021) states, often returning to previous houses repeatedly in a loop during adjustments.

The actions occurring in each house apply not only to creative production but to any other element or action across the other houses as well. Ideas can be selected, tools can be devised, methods of communication can be verified, information can be questioned, or persuasion can be used to obtain resources. The actions that take place in each house are listed in Table 2 and described one by one afterwards.

Table 2. The Houses of Creativity and their actions

The houses:	Actions:
The Supermarket	Selection
The Temple	Observing/Perceiving/Questioning
The Library	Informing oneself
The Cabin	Idea generation
The Laboratory	Elaborating/Verifying
The Hobby House	Enjoying oneself
The Bar	Social distraction
The Warehouse	Stockpiling
The Gallery	Communicating/Convincing

Supermarket

The supermarket is the heart of the creative process and the place where everything that happens in each house of the creativity village is **selected** and discarded: Sawyer (2021), De Bono (2008), Michalko (2001), Berkun (2010), Campbell (1960) and Oech (1998) agree on the great importance of the selection process in creativity or innovation, which is why the supermarket is one of the critical houses.

It is the place of decision-making and **convergent thinking** that uses logical thinking described by Guilford (1950). Decision making is one of the fundamental cognitive processes in human behavior, through which a preferred option or course of action is chosen from a set of alternatives based on specific criteria (Wang & Ruhe, 2008). It is oriented towards deriving the single best (or

correct) solution (Cropley, 2006). For Poincaré (1908, 1952), creating is choosing discerningly. Csikszentmihalyi (1990) argues that one cannot create only good ideas; one must generate many and be capable of discarding the useless ones.

According to Ryan & Deci (2000), the power of choice provides autonomy, control, and freedom, but an excess of options generates paralysis, doubts, anxiety, fear, and the need to invest time and energy. An abundance of choices overwhelms, rather than enhances, our rational decision-making processes (Schwartz, 2000). Once choices have been made from among many options, one may also suffer from (a) regret; (b) opportunity costs, which consist of dissatisfaction at losing the opportunity of other options; (c) the escalation of expectations, which implies that expectations increase with the number of options, making them harder to satisfy; and, finally, from (d) guilt for feeling responsible for a suboptimal choice among so many options (Grant & Schwartz, 2011; Iyengar & Lepper, 2001). Here, we encounter the two key figures from Simon's (1955) seminal theory on decision-making strategies: maximizers and satisficers. Maximizing involves seeking the best outcome through an exhaustive search of all possible options. Satisficing, on the other hand, involves seeking an outcome that is "good enough," stopping the search upon encountering an option that meets an acceptable threshold. According to Iyengar et al. (2006), maximizers achieve better outcomes than satisficers, but they experience more negative feelings because they often fail to meet their high expectations. To mitigate these drawbacks, it would be interesting to narrow down to a few considerably different options and make the selection there (Iyengar & Lepper, 2001). All choices come with uncertainty, because the outcome is unknown (Kahneman, 2011). This is partly because real-life problems feature open boundaries and do not have a single correct solution, as we are accustomed to in education (Dörner & Funke, 2017). In many of these cases, there are multiple "correct solutions" (Schwartz et al., 2011) and attempting to find the perfect choice that might not exist has great cost. According to Grant and Schwartz (2011), choices are more comfortable when individuals have experience or preferences, when options are presented in categories, when choices are not complex, when there is sufficient time available, when participants do not feel responsible for the choice, when there is an option to avoid the choice, and when the options are good.

At the Supermarket is when the decision of how much **risk** to assume is made. Bernoulli (1954) states that most people abhor risk because they value security more and have an aversion to loss. Kahneman (2011) also points out that we only take risks when we are unaware of the danger we face. Innovating means trusting something unknown over something safe or pleasant (Berkun, 2010). When choosing information, an idea, a question, or materials over others, it is the crucial moment in which creativity is chosen. Creativity is a decision (Sternberg, 2006). This is where creativity as a human attitude is manifested and not as an exclusive human capacity (Corcuera & Benito, 2021).

Choices can be **logical, emotional, or random**. Logical choice uses objectivity, concreteness, and specificity. To reach it, means and objectives could be analytically evaluated on one hand, and pros and cons assessed on the other. According to De Bono (2004) and Kahneman (2011), choices

and decisions are made based on feelings even when they seem logical. Instrumentally, if one wants to force this type of choice, it would be necessary to focus on choices that seem beautiful or cause surprise. In creative insight, the unconscious mind selects ideas for aesthetic beauty according to Hadamard (1945) and for surprise according to Haslerud (1972). Kahneman (2003) discovered that analytical and deliberate reasoning is more appropriate in complex or unfamiliar situations and that intuitions can be more useful and reliable when based on extensive experience and applied in well-practiced familiar situations. Cognitive biases distort our perception and judgments, leading us to trust erroneous intuitions or make suboptimal decisions and preventing us from selecting objectively (Murata et al., 2015). When the choice process paralyzes us, it is time to sift through and choose, or leave the decision to chance.

Temple

The Temple is a place for **observation, perception, and questioning**. It is one of the **mental** houses, where relevant questions are raised. However, the Temple is nearly abandoned in this era, as Bauman (2000) notes, due to the diminishing culture of questioning, driven by social and cultural indoctrination that steers individuals toward conformity rather than reflection on their surroundings. Polya (1957), Pretz et al. (2003), and De Bono (2008) define questioning and problem selection as a critical starting point in problem-solving. The question in the Temple acts as a magnifying glass, focusing attention on what is interesting to the inquirer (De Bono, 2004). In the Temple, perception must be sharpened, perspectives must be altered, and one must see what others do not see. Questioning things helps encounter the unexpected and the unknown. We live with intrinsic blindness due to habit, boredom, and overstimulation in a complex world full of stimuli. Observing is about asking questions, seeing with fresh eyes. Perception is about interpretation (Bardes et al., 2001).

Pretz et al. (2003) argue that our education system prepares children more to answer well-defined questions than to ask interesting questions that identify problems or opportunities. Nowadays, with the advent of AI that efficiently answers many questions, the ability to ask the right questions becomes even more crucial compared to merely providing answers. The formulation of the problem is much more important than having a good idea (Csikszentmihalyi, 1990) because if the question is not right, it does not matter how good the idea is. Berkun (2010) asserts that discovering problems requires as much creativity as discovering solutions and that many great insights did not arise from assignments but from the questioning of the genius itself. He also reminds us of the phrase attributed to John Dewey that a well-defined problem is partially solved and the one attributed to Einstein that if he had 20 days to solve a problem, he would spend 19 defining it. Similarly, Csikszentmihalyi (1990) distinguishes between problems received from others and those discovered by oneself. For Papazov and Milhaylova (2023) it is essential to clarify not only the nature of the questions but also their logical sequence.

In the Temple, unresolved issues, problems, culturally accepted ideas, or choices during the creative process are questioned. To initiate a creative development, two elements are required: the theme and the objectives. The theme corresponds to the Problem Finding stage, and the objec-

tives correspond to the Objective Finding stage of Parnes' *Creative Problem-Solving model* (1988, 1992). The **theme** is the starting point from which to begin the journey. It can be materialized in three ways: an unresolved question, a mission (problem or opportunity), or a resource for innovation. The theme is a general concept that one wants to specify, modify, or redefine according to the objectives. **Objectives** are directional compasses with constraints that one wants to impose on the theme to initiate the creative development and maintain it throughout the journey to reach the goal. Objectives are important because their constraints bring out the best in us, forcing us to reflect, rethink, and do things differently (Herman, 2016). In everyday creativity, an objective could be for the outcome to reflect the author (Maslow, 1968). Another objective, if one wants to attract attention, could be to be: new, absurd, fun, mysterious, exciting, narrative, sensorially impactful (contrast, scale, movement/sound), and metaphorical (Corcuera, 2024). According to De Bono (2004), attracting interest is more important than being right. The problem of the blank page is a blockage due to having too many possibilities and not having a starting point; or, as Pressfield (2002) asserts, not being able to take the first step due to the resistance fueled by fear.

Kahneman (2003) posits that there are two modes of thinking. System 1, known as intuitive thinking, operates swiftly and automatically, with little effort and without a sense of voluntary control. It generates impressions and feelings, housing unconscious thought with impulses and sometimes irresponsible associations. It is emotional, subjective, practical, holistic, divergent, and willing to experiment. System 2, known as deliberate thinking, focuses attention on mentally effortful activities with orderly sequences of steps. It relates to the conscious, rational self that acts and chooses. In summary, System 2 knows and describes, while System 1 understands, feels, and lives. When we are able to harness both systems, we achieve our greatest potential and can reach creativity (Buzan, 1984). By asking ourselves questions, we can focus on either one system or both. Creativity depends on our ability to question things from both perspectives of thinking. System 2 is questioned about accepted knowledge, while System 1 is questioned about other worlds or the future.

System 2 is an expert in answering objective questions about the reasonably accepted knowledge of each of our sub-themes and our objectives. That is, it is interrogated about what is supposed to be true, the correct answer accepted by the majority of people. These are the academic questions asked in schools to verify that culturally accepted knowledge has been integrated. A question of this type could be, "What are the parts of an egg?" In practice, to organize the data, one must question what is known about a topic, what is not known, and what needs to be known (Bardes et al., 2001). It is useful to use Hermagoras of Temnos's seven circumstances: what, how, who, when, where, why, and with what means as described by Copeland (1991) and developed in Table 3.

Table 3. Questions on creativity from the seven circumstances of Hermagoras of Temnos

What (is it) (characteristics does it have) (varieties does it have) (relevance does it have), of what (is it composed), what kind of, in what, about what, and which.
How (is it used) (is it produced) (is it transported) (does it affect people), and in what way.
Who (is the protagonist), to whom (is it intended) (does it affect), with whom, for whom, and from whom.
When (how does time affect it), how much, how many times, to what extent, and for how long.
Where from where, to where, in what other place, and at what distance.
Why (cause) (motivation), for what (is it used) (objective), and for which.
With what means , with what, and by what means.

System 1 is queried about other worlds or other times. These are open, subjective, reflective, divergent, absurd, complicated, simplistic, nonsensical, unreal, comparative, hypothetical, exploratory, synthetic questions, questions that have no reasonable answer or that redefine a topic. Objects can be personified, symbols or metaphors can be used, or fantasy can be employed. Questions of this type could be, “Is an egg happy on the moon?” or “What if an egg catches a cold?”

Library

The Library is the place where **information is gathered** and learned. It is one of the houses of knowledge, housing all of humanity’s **knowledge**. According to Csikszentmihalyi (1990), anyone seeking to make a contribution in any discipline must internalize the fundamental knowledge of the field by learning its rules and content. According to Porto and Romo (2022), creative products that can transform a domain emerge after extended periods of learning, dedication, and the identification of opportunities. It is important to identify what is accepted in order to modify it and create something different. Additionally, it is necessary to have knowledge outside of the subject matter to combine and create something surprising. The creative individual is favored if they have a **variety of interests** and **depth in a field** of interest, as well as access to it (Csikszentmihalyi, 1990). Reading, talking to experts, watching documentaries, learning new skills, experiencing various topics, and disregarding the need for practical application; are positive actions for creativity (Corcuera, 2024).

The Library has two drawbacks. The first is that it collects reasonable knowledge and accepted lies that answer known questions. The Library houses the answers to the dreams others had in the past. It could lead to reproduction instead of creation or to creating on top of errors if there is no questioning. The second problem is that we live in a society with an excess of information that interferes with learning and creative problem-solving (Ruff, 2002), leading to psychological stress, errors in decision-making, or disregard for relevant information (Melinat et al., 2014). Furthermore, the Library can engulf the creative individual and force them to postpone action under the pretext of still lacking information. Lim et al. (2017) asserts that procrastination as a strategy to avoid aver-

sive tasks generates anxiety and has a detrimental effect on creativity. Prioritizing helps organize information, saves time, and conserves energy (Bardes et al., 2001).

The information obtained in the Library responds to objective questions, of System 2 thinking, that describe accepted logical reality and is essential in structured ideation methodologies. In the In-genius method (Corcuera, 2024), obtaining this description in the form of an analysis or decomposition of a whole into parts by answering Hermagoras of Temnos's seven circumstances is proposed. It is necessary to leave no gaps for inaccuracies or misinterpretations. This breakdown will be very relevant when ideating in the Cabin.

Cabin

The Cabin is the fun and safe place for **ideation**. It is the other **mental** house, the counterpart of the Temple, where attempts are made to answer its questions with ideas. It involves discovering new possibilities (Csikszentmihalyi, 1990), highly different, original (Fink & Benedek, 2014), including those that may seem most absurd (Osborn, 1953) to open-ended problems. It is connected with **divergent thinking** (Guilford, 1950), which is generative, like a tree growing and expanding to produce many leaves. It is a risk-free zone where judgment is banished. It is the territory of free play that leads to a state of flow (Csikszentmihalyi, 1990). Fixation is a cognitive difficulty in generating more ideas due to attachment to the initial idea or attachment to known solutions (Shroyer et al., 2018). According to Lucas and Nordgren (2015), initial ideas tend to be more conventional. When these are discarded, freedom is found to consider more remote ideas. Additionally, some promising ideas start from novelty and then embrace familiarity. Shroyer et al. (2018) assert that generating more ideas, leads to the emergence of higher-quality ideas. Ideation can be unconscious or conscious (Wallas, 1926).

Unconscious ideation involves moments of insight or eureka, which is the sudden awareness of the solution to a problem (Erickson & Kounios, 2014). It relates to System 1 thinking. Suddenly, without knowing how, an unconscious connection between ideas fits together and emerges (Csikszentmihalyi, 1990). It is difficult to predict when this brilliant idea or solution to a problem will occur. It seems as if the idea seeks one out rather than the other way around. For this to happen there must be a wealth of accumulated information on the topic (Csikszentmihalyi, 1990). Furthermore, mental clarity and concentration resulting from regular meditation favor the successful association of that information to arrive at the brilliant idea (Franco, 2009).

Conscious ideation uses structured creative methodologies. It relates to System 2 thinking. Divergent thinking is the area of creativity that has attracted the most interest from researchers (Runco, 2010), so there are numerous methods available. These range from more free-form methodologies like Osborn's brainstorming (1953) to more structured ones like Eberle's SCAMPER (Totuk, 2024), which involves generating ideas by systematically modifying a product, service, or problem, substituting, combining, adapting, modifying, putting to another use, eliminating, or reversing. These methodologies can employ a combination of elements or questions posed to both System 1 and System 2 thinking, depending on the objectives.

According to Poincaré (1908, 1952), one way to generate ideas is to make **combinations** of elements and select the useful ones. Combinations from distant fields will mostly be sterile, but those that work will be much more fertile than those from close fields. Direct mental associations occur through contrast or opposition; and through proximity, whether temporal, formal, spatial, or conceptual (Corcuera & Benito, 2021). Less obvious mental associations function like combinations from distant fields.

Another way to generate ideas is to respond to the **objective questions** described in the Temple that are asked to System 2 thinking about what is understood as accepted. This provides an analysis of the topic into actionable components. These parts are then acted upon by adding, removing, or modifying elements or uses. Establishing the search for a solution to the problem as a focus would correlate somewhat with vertical thinking, which according to Barak and Doppelt (1999), is selective, sequential, and moves in one direction to select the most promising approach to the problem. Focusing on the parts of the issue would correlate somewhat with lateral thinking, which according to the authors themselves, is generative. Consequently, it could be inferred that using parts as a focus could relate to more divergent and generative thinking. Focusing on one thing inhibits competing concepts due to tunnel vision (Mullainathan & Shafir, 2014). On the other hand, in the obvious and undisputed elements of a topic, the most fertile ideas may appear since almost no one questions the obvious, making them less-traveled places.

Responses to **subjective** and strange **questions** to the System 1 thinking about other worlds or other times are stimuli that break patterns and disconnect from common logical thinking. They can, therefore, also generate uncommon and interesting ideas. Kirton (1989) refers to creative individuals who feel better ideating and are characterized by doing things differently as **innovators**. Innovators inhabit the Cabin.

Laboratory

The Laboratory is the place of **elaboration**, of objective action, of experimenting with the idea, of putting it into real practice, and **evaluating** its behavior. It is one of the houses of **action**. The Laboratory has three problems: it is difficult to enter, difficult to leave, and one may want to abandon it. It is difficult to enter due to the resistance described by Pressfield (2002). Elaboration itself is not difficult; what is challenging is starting to elaborate. When time comes to start the action, one may feel the fear of not being sufficiently prepared or the paralysis caused by too many options without a clear criterion. Once elaboration is underway, there is a feeling of comfort with the inertia of doing, and it may be difficult to go to the Temple to question or to the Cabin to rethink and give a twist to the development. But if these problems are overcome, flow can appear, defined by Csikszentmihalyi (1990) as a state of consciousness almost automatic, without any effort, although highly concentrated. In elaboration, steps forward and steps backward also occur. Herman (2016) relates it to the *pentimento* of artists, which means regret and covering up what they have done and starting from scratch. Van Broekhoven et al. (2020) suggest that, during training in evaluation, participants should classify all their generated ideas according to their feasibility and originality.

They also assert that improving evaluation could be achieved by focusing on building up knowledge and expertise.

Kirton (1989) refers to **adapters** as creative individuals who feel better elaborating the idea and are characterized by doing things better. Adapters inhabit the Laboratory.

Hobby House

The Hobby House is the place of **enjoyment**. It is the other house of **action**, where one does things that personally satisfy them. It is the counterpart of the Laboratory. The Hobby House is related to one's subjective interests. It is where incubation appears, energy is recharged, and elements from other fields combine with those of the problem. Elisondo (2018), Csikszentmihalyi (1990), Root-Bernstein et al. (1995), Davis et al. (2014), Wolfradt & Pretz (2001), and Cotter et al. (2016) confirm that people who engage in leisure activities are more creative than those who do not. In the Hobby House, the mind ceases to be consciously preoccupied with the problem, the censorship of consciousness disappears, and the problem is revealed as it is in consciousness (Csikszentmihalyi, 1990). Whenever there is previously acquired information, the mind undergoes some form of processing without being aware, and incubation occurs. Moderate procrastination after generating ideas allows the ideas to germinate (Shin & Grant, 2021).

The actions carried out in the Hobby House are intrinsically rewarding and serve to recharge and revitalize the high energy consumption of creative development (Csikszentmihalyi, 1990). Zielińska (2020) classifies creative acts into five areas: crafts like scrapbooking, cultural sophistication like reading books, self-expressive creativity like inventing a recipe, interpersonal creativity like telling a joke, and refined media consumption like reading newspapers. Creative activities were further classified into ten distinct domains of creativity as proposed by Kaufman (2020), namely visual art, business/event organization, science, technology, every-day realm, social science/communication, performance, hands-on, academic/scholastic, and writing. Stebbins (2015) classifies leisure around three dimensions: serious, informal, and project-based. **Serious leisure** is devoted work, in which perseverance, continuous improvement, and significant personal effort are constituents. **Informal leisure** is a pleasurable, relatively ephemeral, requiring little or no special training to enjoy, with a hedonistic component. **Project-based leisure** is a short-term, occasional or one-time, although infrequent, carried out in leisure time. Hegarty (2009) defines creative leisure as creating for the sake of creating, when one has the perception of freedom and intrinsic desire. Leisure activities provide skills (Kotro, 2007) and knowledge (Granovetter, 1973, 1983) that are subsequently used in problem-solving.

Bar

The Bar is the place of **social distraction**. It is the other house of **knowledge** that harbors the knowledge of the people one interacts with. It is where one meets colleagues, sometimes with similar interests, sometimes working in the same field, sometimes just those who one holds in esteem, but treats as equals. It is the counterpart of the Library but with a more subjective component, as one

obtains information from colleagues biased by their interests and viewpoints. It shares with the Hobby House the component of distraction; but in the Bar, the distraction is mental according to the interests of others; whereas in the Hobby House, it is action according to one's own interests. The Bar is the place to take a break and **shift attention to change perspectives** and focus, thanks to the knowledge of others.

The need for a break lies in the fact that the brain is not built to focus on one thing for a long time. The cognitive system, to avoid overstimulation, becomes accustomed to what is in front of it and stops perceiving it. Through brief pauses, temporary deactivation of focus is achieved, allowing for long-term concentration (Herman, 2016). Distractions also have their downside since if they appear in the middle of the flow process or during concentration on an ambitious task, they can instantly make them disappear, and if the task is arduous, it can be difficult to regain concentration (Csikszentmihalyi, 1990).

Often, the brain filters information according to its preconceived notions (Herman, 2016) and focuses on dead ends. In such cases, it becomes necessary to change perspective. The different opinion of a colleague with a fresh perspective can be very helpful. The viewpoint of someone dedicated to similar problems can be as interesting in helping to redefine or specify (Csikszentmihalyi, 1990) as that of someone completely unrelated to the topic (Herman, 2016) who questions underlying issues that have been assumed and overlooked to address directly to more specialized details. According to Nemeth (1986), minority viewpoints stimulate attention and divergent thinking. The perspective can be physical or mental. To change the physical perspective, one must look from another place or position. To change the mental perspective, one can try to empathize, ask other people, or imagine being another type of person (Corcuera & Benito 2021). The focus can be expanded, reduced, or aimed elsewhere.

Warehouse

The Warehouse is the house for **stockpiling** available resources within reach of the creator in order to facilitate creative development. It is the house of **materialization** concerning the objective components. In the Warehouse, one can find economic resources, materials, tools and machines, time, and finally teams of people with their knowledge and expertise available at that place and time for that project. It is connected to planning. The difference between the Warehouse and the Library is that the Library houses only the existing knowledge in humanity, whereas the Warehouse contains various resources (physical or otherwise) accessible to the creator. This means that if the Library contains knowledge or techniques that none of the available individuals are capable of understanding or applying, then that knowledge will not be in the Warehouse until they integrate it.

According to Csikszentmihalyi (1990), creative individuals are characterized by their ability to adapt to any situation and make use of what they have at hand. Additionally, a relevant skill in the creative individual is knowing what something is good for (Berkun, 2010). Amabile and Kramer (2011), in their *Progress Theory*, include resources among the seven catalysts that need to be provided to teams to experience significant progress. According to Glăveanu (2013), creativity researchers

have not recognized the existence of material or physical press. He defines a new framework of creativity in which he adds affordances to Rhodes' (1961) 4Ps model, which, according to Stoffregen (2003), are opportunities for action. For Glăveanu (2013), different available material resources may be discovered or not depending on the knowledge and skills of the creative individual. The creator must observe and make use of them, master that use, and create new uses by adapting existing resources. Therefore, the creator can and should modify the Warehouse. Kaufman and Glăveanu (2022) as well as Csikszentmihalyi (1990) assert that having resources or access to them, both internal and external, can positively influence the creative process. According to Moreau and Dahl (2005), constraints, provided there is ample time, enhance ideation because they lead people to deviate from traditionally established means and solutions. In line with this, Mehta and Zhu (2015) empirically demonstrate that scarcity increases the novelty of product usage solutions without compromising their appropriateness. Additionally, the feeling of scarcity can activate a restrictive mindset that enhances ideation even after the constraints are removed.

Mullainathan and Shafir (2014) affirm that scarcity captures the mind, which focuses on unmet needs, resulting in better performance in those pressing needs. Scarcity pressures choices and actions, making it useful in urgent problems. Since it generates attention, it prevents the mind from being distracted, thus providing concentration. It also makes individuals more efficient by trying to economize. The mind abandons its objectivity and focuses on the focal point without addressing other issues. The inhibition of the tunnel effect is the cause of the benefits and drawbacks of scarcity. Scarcity entails short-term benefits and long-term drawbacks due to excessive cognitive load from constantly worrying about resource scarcity along with making complicated decisions, excessive focus on urgent needs, and finally perpetuating a cycle of scarcity due to resource mismanagement.

Gallery

The Gallery is the house where the creation is **communicated** and **convincingly** presented. It is the other house of completed materialization on display. It is the counterpart of the Warehouse but with a more subjective component, as it is not objective raw material but a compound of the same selected and presented with the author's subjectivity. According to Tascón (2021), communication and creativity are the most important skills for personal and professional development in this century. Communication involves conveying a message from a sender to a receiver. The Gallery is the place to convince the realm of the value of the creation so that it can be incorporated into its field. According to Csikszentmihalyi (1990), creative ideas disappear if there is no audience to register and realize them. Therefore, experts are the ones who recognize and value creativity. For the author, the field determines what the realm can accept; thus, in science, if a theory goes against the accepted consensus, it cannot prosper, but in art, it is the artistic establishment that sets the guidelines. Some psychologists assert that creativity is a matter of **attribution** because, in practice, the value of a work is sometimes overestimated, and at other times, its merit is denied. According to Berkun (2010), people, in general, find it difficult to change their minds, and the most frustrating

challenge for innovators is dealing with the difference between their own vision of the work and how the realm sees it, regardless of how brilliant it may be. They need persuasion to convince others of their project and to invest resources in its implementation. Simonton (1990) elaborates on a model of creativity in which he adds persuasion as the fifth element, defining it as the ability to convince others of the value of one's own work, introducing the communicative dimension to the creative result. For Berkun (2010), often the difference between success and failure is not so much talent or charisma, but relentlessness. The author emphasizes that for Steve Jobs, what determined success was perseverance. For Tormala et al. (2006), the secret to success in persuasion is credibility, and if it can be feigned, everything is accomplished. However, feigning sincerity is difficult, so to achieve maximum effectiveness, one must firmly believe in the project. To convince, one must first communicate well. According to Grant (2013), reframing fear into excitement significantly enhances persuasion. The explanation is based on the fact that suppressing a strong emotion is very complicated, while it is easier to transform it into another. For Herman (2016), the most important part of a message is how it is communicated because it can ensure whether it is received or not. To do this, she suggests: repeat, rename, and reframe. Firstly, one must ensure that the recipient repeats the message to confirm understanding and to help integrate it. Secondly, since changes initially may generate rejection, renaming them may be the solution for better acceptance. Renaming, means: calling things that the audience finds difficult to accept in a more amiable way to avoid encountering negativity. Thirdly, reframing pursues the same purpose as renaming but concerning the way something is presented.

CONCLUDING THOUGHTS

The Houses of Creativity is a framework of the creative process that, along with the Octahedral Creativity Model (Corcuera, 2022) and the definition of creativity where "creativity is a quality that depends on the capacity and attitude to create something new, capable of adding value or emotion" (Corcuera and Benito, 2021), aims to construct an integrated proposal compatible with previous theories on the understanding of creativity. This is necessary in a reality, where the absence of an integrating framework adapted to the incursion of new theories prevents us from achieving a global vision of a complete puzzle, where each theory fits perfectly.

In this study, Wallas' model (1926) has been considered alongside 24 other subsequent models. The Houses of Creativity is compatible with preceding models and addresses three major shortcomings:

1. Previous models select phases based on a chronological order of actions in a supposed linear process with a beginning and an end (preparation, incubation, illumination, and verification), even though it is paradoxically concluded that the phases of creative development are iterative and the process is non-linear (Csikszentmihalyi, 1990; Haase et al.,

2023; Sawyer, 2021). In *The Houses of Creativity*, the selection criterion for phases is conceptual rather than temporal, based on the type of activity. This paradigm shift provides a more accurate conceptual and temporal description of creative development, without defining the beginning and the end house, in a process that is itinerant within a non-linear structure more akin to a honeycomb. In the reality of creative development, one could be elaborating in the Laboratory and get inspired for another project or during a conversation with a colleague in the Bar.

2. In previous models, the actions that occur in the phases apply to creative production, while in *The Houses of Creativity* these actions also apply to elements of other phases, reflecting a reality of creative developments overlooked in prior theoretical models. One can devise creative production as well as raw materials in the Warehouse, tools for elaboration in the Laboratory, or ways to communicate the production in the Gallery.
3. Some previous models, such as Wallas' (1926) and many based on it, do not describe the full reality as they consider only cognitive stages, excluding relevant non-cognitive phases that occur in creative development, such as gathering materials, physically elaborating/verifying, or communicating. Other models, although they incorporate non-mental activities, exclude activities not intrinsically related to creative production such as socializing or having fun, which are crucial in creative development.

The Houses of Creativity comprises nine houses where actions occur: **Supermarket** (selecting), **Temple** (observing, perceiving, questioning), **Library** (informing), **Cabin** (ideating), **Bar** (distracting and socializing), **Warehouse** (stockpiling), **Hobby House** (enjoying), **Laboratory** (developing and verifying), and **Gallery** (communicating and convincing). These houses are classified into mental, action, materialization, and knowledge categories. Within each classification, there exists a subjective versus objective pole. Conceptually, the most important and central house is the Supermarket, because it not only focuses on creative production (ideas or physical products), but also acts as the pivotal point for all choices in each phase-house of the creative process. In the current sociocultural context characterized by distraction, a decline in the capacity for questioning that compels us to adhere to established rules, and the rise of artificial intelligence, the most significant house is the Temple. It is essential to reclaim our ability to perceive details with precision, cultivate the skill of asking thought-provoking questions, and learn to engage effectively with AI. The Cabin has historically been the most favored house in creativity research, though today fertile research should be adapted to include AI, which can greatly assist in the ideation process. The current problem with the Library is the excess of information and the mixture of knowledge of varying veracity. Here, the two critical houses come into play: the Supermarket for selection amid excess and the Temple for questioning veracity. There is a risk that the Library could overwhelm the creative individual and impede progress. The Bar deserves researchers' attention, because it has never been considered a phase in creativity, yet from this new physical or collegial perspective, questioning the creator's blind spots can break down barriers that might otherwise slow or prematurely end creative de-

velopment. The Laboratory is a domain-specific place, where perseverance and finding flow are crucial. The Hobby House, alongside the Bar, is another traditionally neglected phase in the creative process, yet it deserves study as it relates to incubation, energy recharging, disconnecting from a dead-end focus, and providing resources far removed from the subject that can generate the most fertile solutions. The Warehouse has not been well studied because it seems obvious, and as stated in this study, sometimes the most brilliant ideas arise from questioning the obvious, warranting a review that might surprise. The Gallery is also highly relevant in today's sociocultural context of high competition for attention on social networks, necessitating the inclusion of marketing psychology, which creators greatly need.

Currently, there is consensus among researchers that measuring creativity remains an unresolved issue (Said Metwaly et al., 2017). Fürst et al. (2012) and Lubart (2001) suggest that a good description of the creative process could lay the groundwork for establishing more effective methods. The Houses of Creativity, as a creative process that addresses some major problems of previous models, aims to be an indispensable tool for developing more effective creative assessment methods.

While major creativity enhancement programs are cognitively based and focused on improving ideation, this new conceptualization of the creative process could lead to the implementation of programs that address the needs of the previously overlooked phases.

Limitations and Future Research

There is a need to delve deeper into the exhaustive study of activities occurring within each house and their interrelation with other houses, because this study aims to be a comprehensive proposal that accommodates a wide range of creative possibilities and opens new avenues for advancement. This study has focused on individual creative processes rather than collaborative interdisciplinary contexts, which represent the future in our interconnected and specialized world. This context merits extrapolation from the basic model in applied studies. Examining the cognitive and conative personal traits relevant to each house could provide valuable insights for enhancing both assessment methods and quality improvement programs. An important research question could explore how person-related variables interact with house-specific activities and processes. For example, which individuals benefit most from spending time in the bar? The framework has also avoided specificity across different domains. Future research could explore how various domains interact with the specific activities and processes of each house. For instance, what types of Bar settings are most effective for individuals working within specific domains? Once it is identified that mental actions occur in the Supermarket, Cabin, and Temple, further investigation could explore which activities in these houses and how could benefit from Artificial Intelligence in assisting humans and how this assistance could be implemented. Exploring the most critical houses (Supermarket, Temple, and Gallery) and those less favored by creativity research (Bar, Hobby house, and Warehouse) could enhance understanding of the construct as a whole. This could lead to the development of improved tools for evaluating creative potential, designing new creativity enhancement

programs tailored to the skills needed in each house according to individual needs, or fostering the creation of multidisciplinary teams. Tools from fields such as decision-making psychology could be imported for use in the Supermarket, learning psychology for the Library, marketing psychology for the Gallery, or reimagining tools such as ideation applied to generating questions rather than solutions.

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