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The Role of Play in Fostering Creativity and Purpose

Caitlin Quarrington

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THE ROLE OF PLAY IN FOSTERING CREATIVITY AND PURPOSE

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CAITLIN QUARRINGTON

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Advisor: Robert Ricketts

ABSTRACT

While play is a universal experience that transcends age, discipline, and location, it is often understood to be a juvenile experience and is not intentionally pursued into adulthood. However, play has positive benefits for people of all ages; it can drive intrinsic motivation, increase creativity, and build a sense of meaning and purpose in both individuals and teams. Building on existing understandings of play and creativity, this Synthesis develops a transdisciplinary Play-Flow Intervention Model that leverages play as an intervention at two critical points during the flow cycle to alleviate struggle and expedite movement towards flow. Integrating play during periods of creative struggle can shorten this phase; play during flow states can extend awareness and creative output. With deliberate practice over time, individuals can foster a mindset or orientation towards play and build playfulness.

Play may not be appropriate or applicable across all contexts, particularly in certain work environments, but systems can be designed to promote play. Addressing both design as well as systems change is critical for those seeking to leverage the inherent benefits of play, which span emotional, physiological, and intellectual realms. The invitation to embrace playfulness across all aspects of life is offered as an opportunity to reimagine how play might shift our relationships with our work, free time, and the communities in which we live.

Keywords: play, playfulness, creativity, flow, purpose, intrinsic motivation, systems change, systems design

Contents

I.   Introduction: (Re)discovering and defining one's spark

Spark is powerful. Describing spark in words alone is difficult, though an understanding of it is universally sensed; it is an experience of positive physical energy, mental engagement, and emotional connection that occur simultaneously. When spark ignites in an individual, it might be described as motivation or inspiration, and the consequence of experiencing spark is often the creation of something innovative. Working in teams in the midst of collective spark fuels a shared energy that drives creativity and transformation. Whether experienced as an "aha moment," puzzle pieces falling into place, or the alignment of moving components, this synchronicity has been sought across societies and disciplines, transcending all demographics.

In Marie Kondo's work, she refers to what "sparks joy" as things that speak to the heart (KonMari Media, 2020). When we lack spark, our pursuits are not connected with us on the emotional level necessary for intrinsic motivation to flourish. Openness, eagerness and willingness to play and learn are key components of this motivation (Deci & Ryan, 2010). When this energy is diminished, we might feel apathetic, bored, or anxious; breaking free of these states requires mental and emotional shifts. When these shifts create space for internal release, we can find ourselves in a state of *flow* - a concept that will be unpacked later in this work - particularly as it relates to motivation and purpose.

Many individuals cycle in and out of phases where inspiration may wax and wane, whether in professional pursuits or life in general. My aim in undertaking this project was to discover how to intentionally capture one's spark, how to sustain it over increasingly long periods of time, and how to share it with others. Because when that spark occurs, it is energy permeating every cell of our being. It is simultaneously a lightness and a groundedness. Time seems suspended - or perhaps it rushes along like a river - because what was once a challenge is

now *fun*. The work is generated in a way that feels easy; we feel competent, and we sense even as the product is being created that it is good. This exchange leads us to feel that perhaps we have done something interesting, something to be proud to share, something that is worthy of putting out into the world. This is not to say that we don't feel tired through this experience, because we do; we expend energy that is poured out into the universe while at the same time we recharge our mental and emotional batteries. It feels so good to change the narrative of depleted motivation and find oneself in a place where creative output emerges. When that positive experience recurs over an extended period of time, then the moments of purpose-driven work combine to create something more. Chip Gaines (2017) wrote, "A job is something you do for money. Your life's work is done for a bigger purpose...And when you manage to find that work - that's when it starts to feel like play." It is in the adding-up of meaningful moments that we might start to build towards our purpose.

A colleague once described *purpose* to me as how we feel when we put our gifts into action. Leveraging our skills to face difficult challenges is key to the psychological concept of achieving flow (Csikszentmihalyi, 1990); purpose and flow are intrinsically connected. When we ponder the impact we might have in the world and consider our "why," we are beginning to grapple with our purpose. Purpose is a sustained, driving reason or aim coupled with motivation to achieve it. Purpose can be thought of as a step beyond making meaning: it is *directing* meaning. And while purpose can also fluctuate in how strongly it is felt from day to day or year to year, the summation of moments of spark accumulate over time towards building our enduring purpose.

There comes a point in our lives when we start a long and complicated relationship with work. For most, this launching-off into the world of work starts as we are transitioning from

childhood into adulthood, discovering jobs that become careers, which ideally become our callings. However, for others, "work" is associated with horrible bosses and overflowing inboxes that inspire dread as Monday morning approaches. The average person spends around 90,000 hours of their life working (Thompson, 2016), so while not essential, it would seem desirable to foster some degree of spark in our daily jobs, whatever they may be. I recently attended a conference for professional educators. "Try not to refer to classroom tasks as *work*," one of the speakers urged. "We don't want to deter kids from participating." Reflecting on this statement and the underlying sentiment - that work is bad or to be avoided - I wondered how we got to this point, either as a room of educators influencing the next generation of workers, or collectively as a society. If work life begins at or around graduation (whether from high school, college, or university), are young people looking forward to intentionally seeking out inspiring paths for the 40, 50, or even 60 or more years that they may be engaged in work? When vacations seem more motivating than a nine-to-five job, can moments of spark still emerge in daily tasks? How do we direct meaning and realize our purpose through our work?

There are a variety of reasons that propel us to take jobs - financial pressures, family commitments, a lack of selection - all of which may not inspire or motivate us. Work, when viewed as the activities we pursue in order to financially sustain ourselves, may be purpose-driven towards a paycheque, but it may not always provide a sense of emotional or *life* purpose. Finding the kind of motivational drive I am describing through professional, paying endeavours, while possible, may not always be feasible. This research has been undertaken to ignite the spark for those who may have lost inspiration at work or in life - or who perhaps have never experienced the joy that comes when elements align, eliciting the spark. When that energy is

palpable and felt in a collective, it nearly bursts. In conversation with psychologist Adam Grant, Trevor Noah of The Daily Show describes this experience:

> Burstiness is like the best moments in improv jazz. Someone plays a note, someone else jumps in with a harmony, and pretty soon, you have a collective sound that no one planned. Most groups never get to that point, but you know burstiness when you see it. At The Daily Show, the room just literally sounds like it's bursting with ideas. (Grant, 2018)

How can we find that energy? For those who have it, how can we extend the duration of the spark? And when in teams, how can we start to move from individual spark or purpose to shared and collective purpose?

The answer to all of these questions, for me, is *play*.

Play to light a spark. Play to extend periods of flow and build a sense of purpose. Play to unite teams in creative output and purpose.

Play is a path that arouses a feeling of excitement while also driving us towards deeper and more enduring meaning, creativity, and purpose. The power of this sort of creativity is more than just individual emotional fulfilment. Creativity is often described as the ability to generate relevant and unique solutions to problems (Mumaw, 2014). Furthermore, creativity helps humans - and other living things - with conflict avoidance, the obtaining of resources, and survival (Bateson et al., 2013; Behncke, 2011); an elevated creative capacity creates greater openness, adaptability, and innovation in the face of challenges or problems. In his book, *Originals*, Adam Grant states that originality starts with creativity; creativity is the generation of a concept that is novel and useful, and originality is championing these novel ideas that are non-comforming, improving how things work, and making them a reality (Grant, 2016). When viewed this way, creativity is a highly valuable trait for individuals, teams, and entire organizations.

A creative organization is one in which innovation is valued and challenges are overcome, often creating a competitive advantage when highly unique ideas can be marketed.

When creative individuals come together to form creative teams, and when these creative teams are encouraged by an organizational culture that further fosters creativity, organizations are more likely to be disruptive and excel in their space. Thus, investigating the correlations between play and creative output and implementing strategies to encourage play across diverse contexts may lead to greater innovation.

Most educators can attest to the power of play in the classroom and beyond. Learning environments that intentionally create opportunities for hands-on experimentation and construction provide conduits to develop collaborative skills and increased comfort with failure. Such competency-building conduits can lead to the faster iteration and generation of new ideas when challenges arise. Games and unstructured play increase engagement and are often turned to as ways to "make learning fun," resulting in the release of endorphins and provoking curiosity, which is a precursor to creativity (Hagtvedt et al., 2019).

The value of play in learning transcends age, and as I have navigated across various professional contexts, I have led teams in leveraging play, both as recreation and as an integral element of work itself. As a coach and facilitator of professional development, I have observed first-hand what *disengagemen*t looks like: people are apathetic, they hone in too quickly on mediocre decisions, and they are emotionally disconnected from peers and work itself. When these same individuals and teams have begun to participate in play through hands-on games, simulations and role play, and construction and prototyping, the entire context shifts. There is interest in generating new ideas, *many* new ideas, and exploring "what could be." Communication and collaboration among groups builds reciprocal energy when focused on a shared experience such as play. And perhaps most importantly, levity and laughter emerge in these spaces. Play, as will be discussed further (see Section IV: Intervention 1), has an enormous

positive impact on mental well-being and can be an emotionally protective factor against stress and anxiety. Both through physiological and psychological impacts, I have experienced in myself and observed through others how play leads to heightened positivity. In workplace environments, where tensions can often run high, this is not an insignificant consideration.

It is not coincidental that many people consider work and play to be antonyms. With a typically negative disposition towards "work" - both as a term and as a concept - it is no wonder that play has been narrowly categorized as the break times when we step away from work. And while recreational play can serve as that pause in our working days, whatever that work may comprise, it is important to challenge the view that work and play sit at opposite ends of an activity spectrum. When the definition and understanding of play is broadened, we can view work and play as intermingling and see that valuable (and indeed, sparking and purposeful) moments happen when we leverage play as a conduit towards creativity and purpose.

II.   Work plus (not versus) play: what is play?

Albert Einstein once said, "Play is the highest form of research." If one views research as an opportunity to explore, make new discoveries, collaborate with others, and create meaning, then play is an evolved path of investigation. Play is also something that we undertake instinctively as living beings - not just humans, but shared across species as well (Brown, S., 2008; Behncke, 2011). Certainly in children, play is an activity that is nearly universally embraced. Babies, toddlers, children, and teens engage in spontaneous games and role-playing, interact with toys and objects as tools, and pursue physical activity through sport, exploration, and structured games such as hide-and-seek or tag. The value of play as "research" is evident as species (humans or otherwise) learn the utility of their surrounding environments and explore the

dynamics of relationships with others. Play has been present throughout life and continues to be present across generations and societies.

While play is a millennia-old activity - an instinctive drive - it has often been swept aside in more recent generations of human life, particularly from a Western-oriented perspective. Societal shifts like the Industrial Revolution of the early 1800's or the migration towards an online, digital world starting with the dot-com boom in the 1990's have been periods in which humans labour towards efficiency, outputs, and quantitative metrics and deliverables. Play as recreation requires time and intention, stepping aside from work outputs; the perception that play might detract from work and associated profit can diminish one's pursuit of it. When time feels like a precious commodity, play may not be prioritized, even if creating the time and space for it may ultimately result in significant gains in creative processing, ideation, and ultimately work-related outputs. Similarly, even when play is embedded into work processes through activities such as creative brainstorming, prototyping ideas, or experimenting with design, while not requiring the same "time away" as recreational play, it might feel unfeasible when driving towards a set endpoint or when motivated to achieve a certain financial return. This is not to say that play has been extinguished over time, but rather that for many adults, a distance has grown between the youthful energy that comes with play and the creativity that they might have experienced in their own childhood experiences of play as opposed to how their own work lives are viewed now.

The most common question I field when discussing play in the context of work is, *"What do you mean by 'play'?"* This is not surprising, in that work and play are not often brought into the same spheres of conversation. Brendan Boyle, IDEO partner and founder of the IDEO Play Lab, has said that in playful dynamics at work, everything is by design: "[Play is] a clever way to

force an interaction in a delightful experience" (Creative Confidence, 2020). Encapsulating play in this "delightful" umbrella points to that intangible feeling - the "spark" - that play fosters. While evocative, this description lacks specificity and criteria that might help in establishing a common understanding of play. What play looks like in a work context - particularly when play and work may have been viewed as opposite ends of a spectrum, as opposed to effortlessly commingling to maximize professional experience - is important to address.

For the purpose of establishing some defined boundaries on play (both what it is, and what it is not), the definition of play that I have adopted is one synthesized by Petelczyc et al. (2018). Based on the work of Van Vleet and Feeney (2015), it states that play is any activity that has all of the following key elements:

1. The goal of amusement and fun for the participant. (Note: while play should be fun, not all that is "fun" can be considered play!)

2. It is freely chosen, undertaken with enthusiasm and a spontaneous (or in-the-moment) approach.

3. It is highly interactive (either within a team, or with the activity itself).

Based on this three-pronged understanding of play - that it is fun, in-the-moment, and interactive - one can start to imagine what activities might qualify as being "play" by evaluating against these criteria.

There are solitary activities that may or may not be considered play. For example, reading a novel may be both enjoyable and undertaken with enthusiasm in the moment, but it lacks interaction and therefore is not a play activity. Conversely, a video game can be fun, in-the-moment, and interactive as an individual navigates through various challenges; therefore, it is a good example of an individual pursuing play. In groups or teams, certain activities also may or

may not be labeled as play. A mandated team potluck every Friday afternoon might be fun (at least, in an ideal world it would be); it also is likely interactive, but it does not necessarily meet the criteria of being freely chosen and in-the-moment. However, a group that initiates a pick-up game of basketball meets the play criteria in all regards.

It should additionally be noted that while play is focused on fun and enjoyment, many play theorists agree that it still occurs within a framework or with governing rules that regulate the actions of the group (Brown, T., 2008, Petelczyc et al., 2018). For example, most sports and games that we participate in have rules so that players can know what is expected of both themselves and fellow participants. There is a sense of governing the activity occurring within its defined space. However, regardless of *how* play is practiced, it propels people into a new dimension or functional plane both physically and psychologically. While a play activity takes place within a defined time (i.e., being in-the-moment and interactive, it cannot go on forever), playfulness as an enduring mindset is something that can powerfully influence how we view the world around us.

This introduces an additional layer of complexity, which is the differentiation between play and playfulness. Both are key concepts, and while strongly correlated, they are not identical. "Play" can best be viewed as the activity (or set of activities) one is engaged in - meeting the three-pronged criteria - that brings about specific, tangible shifts. Blanche (2007) describes emotional responses such as excitement, energy, and pleasure that come about when we participate in play. Some of these emotional outputs lead to significant longer-term benefits, discussed in Section V "Intervention 2: Prolonging creativity." It is here, in this emotional component, that playfulness as a trait or way of being begins to emerge.

"Playfulness" is perhaps best viewed as a mindset, one in which play is embraced and integrated in myriad ways throughout life. Like play, it is rooted in an attitude of curiosity and exploration, and it is imaginative (Brown, S., 2008). While play and work are sometimes mistakenly juxtaposed as opposites, playfulness and seriousness similarly can be erroneously labeled as antonyms. Playfulness should not be viewed as an absence of focus or drive with regards to accomplishing a task. Rather, playfulness and a predisposition towards play is an intentional, process-oriented mindset (Tartakovsky, 2018) with an ability to stimulate intrinsic motivation (Mainemelis & Ronson, 2006).

Playfulness, when spiritedly practiced with the goal of exploring both one's own ideas and others' from a wide range of perspectives, can lead to creativity and open the mind to possibility. Proyer (2017) found that playful individuals have original perspectives that are also flexible, meaning that they more easily can find unusual or unique solutions when faced with complex challenges; further, he noted that playfulness is associated with stronger observational skills, seeing ideas from multiple angles, and that playful people can transform or reinterpret situations to make them more entertaining or less stressful. When viewed through this lens, it becomes clear that playfulness is not an absence of seriousness, but rather an infusion of a personality trait that can offer a strategic advantage to teams, adding levity, idea generation, and offering unique perspectives to challenging problems and contexts, all while enjoying the process.

Proyer's research also defines four features of playfulness: it is other-directed (social and deriving enjoyment from being with others), lighthearted (not worrying, finding humour in life), intellectual (liking to play with thoughts, ideas, words, and complex problems), and whimsical (finding amusement in the strange, liking odd or unusual things, and being easily able to amuse

oneself in everyday life). Playful individuals exhibiting these characteristics can add value to the

world around them. And when we broaden our understanding of play to be not just recreation,

but also play *through* work, we unleash powerful potential.

It is perhaps easiest to conceptualize what play and playfulness at work look like by

exploring successful organizations that have fostered cultures integrating these concepts. Some,

like the toy company, The LEGO Group, have shared their strategically playful approaches

through professional training. LEGO Education's Serious Play methodology guides teams, often

working in more traditionally non-playful corporate settings, through the use of LEGO as a tool

to "imagine, discover, and design opportunities...facilitating thought that, through play,

encourages creativity and innovation" (Liquid Agency, 2014). Participants create physical

representations of challenges, creative expression, and building visions for future growth and

strategy (The LEGO Group, 2019). I have followed similar sorts of approaches in the teacher

training workshops I lead, using playdough, cardboard, or other physical materials to create

prototypes, explore, and unpack ideas and challenges. These sorts of professional development

sessions using play are deliberately and intentionally structured so as to foster collaborative play,

invite all participants to freely enter this playful space, and reap the mutual benefits of the

experience. This type of model presents an interesting opportunity for coaches and leaders to

build the intentional practice of play and playfulness in work; not everyone may enjoy sports or a

climbing wall, but engaging teams in a facilitated play experience like LEGO Serious Play may

be an easy entry point. Those play activities that require no previous experience, no particular

expertise, and facilitate communication and connection among participants will likely be best

received. As people gain more exposure and practice with hands-on play, they will likely

experience an increased openness to risk-taking and exploration of other forms of play, thereby building a playful mindset.

Play as recreation is important, and it can be seen in some progressive organizations - perhaps most well-known is Google, where even the architectural design is playful. The Google Toronto office has Morse code in the wallpaper (a workout for the brain!); other global offices include climbing walls, shared bicycles, and even slides that foster opportunity for play (Office Snapshots, n.d.). Play comes about through the activity itself or by providing a new space to step away from a work task, potentially opening individuals up to new conversations, perspectives, or connections.

Taking this a step further and transforming the idea of play beyond that of a purely recreational activity increasingly blurs boundaries between work and play, positioning play as an integral part of the work itself. In the book *How Google Works* (Schmidt & Rosenburg, 2014), the authors outline both how the playful culture of Google was first established and how it has continued to be known for its play and creativity. "Googleyness" (a playful term in itself) is presented as a critical trait for employees: thinking outside of the box, departing from the norm, and being disruptive. Bock (2015) went into further detail specific to Google, in particular talking about how Google's hiring practices to assess for playfulness have supported this culture - that is, how institutionalization of Google's culture has been successful in perpetuating play and creativity. By intentionally building teams within Google that prescribe to playfulness and embrace play, the organization has been successful in building a collective culture that reaps the associated benefits.

Another organization known for both innovation as well as curiosity and experimentation is design and consulting firm, IDEO. Tim Brown, chair of IDEO, cites playful exploration,

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playful building, and role-play as three ways in which play is embedded into IDEO's processes (Brown, T., 2008). To further elaborate on IDEO's processes, Boyle (2020) breaks down play into five critical behaviours:

- Exploratory play: Generating new ideas and fostering a divergent mindset are goals of exploratory play. In this type of play, people engage in creative activities that are likely to fuel a larger volume of ideas, sometimes pushing ideas to extreme limits to playfully explore new frontiers (Creative Confidence, 2020). While exploratory play can start with brainstorming, it can be pushed into new territory with intentional framing of questions, deeper probing, and collaboration.

- Constructive play: In constructive play, hands-on prototyping (e.g., creating through basic physical materials such as playdough or LEGO, or coming up with a rough working model of an idea) permits individuals and teams to make a physical representation of a concept and quickly iterate on the design. Boyle states that the average four-year old child (a time in life when curiosity and discovery are both typically extremely high - an experience that adults can recapture) spends approximately 50% of their time on constructive play. This is learning through doing.

- Role play: In role play, we act out situations in order to foster empathy, which can drive both problem identification and solution generation (key parts of IDEO's design thinking cycle). Role playing permits individuals to adopt a new perspective and anticipate others' needs, which is something that may open up novel ideas for design.

- Social play: This is creative problem solving as a group, where team dynamics are critical and physical presence is key. Sitting on the floor instead of chairs, sketching by hand rather than using laptops, or using other physical design choices for collaboration can signal an openness for social play.

- Playground: The "playground" element of IDEO's approach to play has to do with the physical space itself and how it may foster play. For example, breakout spaces where teams can gather, open uncarpeted areas for prototyping, and even the presence of laughter can foster continued play within workplace environments.

IDEO makes the important point that play is not (nor should it be) viewed as frivolous or unprofessional; one can be a serious professional and be in the midst of solving real work-related challenges while also being playful. Work and play are not oppositional characteristics on a binary, but rather, they can co-exist in any given person or team. The five play behaviours that Boyle outlines have relevance across team sizes and industries.

In addition to these examples of play at work, playful people also embrace things like jokes, wordplay, improvisation, and challenges (Proyer, 2017) which can be woven into our work to stimulate playfulness. Collectively, any and all of these approaches represent applications of play that have a place across multiple disciplines.

III.   A new vision: All roads lead to purpose, but are paved with play

Intentionally engaging in play has a positive impact on us well beyond the moments in which it is practiced, connecting us to increased intrinsic motivation and a sense of purpose. In positive psychology, flow states are one way of describing the experience of being "in the zone" for extended periods of time; during a flow state, an individual is completely immersed in an

activity and skill use is maximized (Csikszentmihalyi, 1990). Whether brief or prolonged, these flow states are impactful:

> ...we have all experienced times when, instead of being buffeted by anonymous forces, we do feel in control of our actions, masters of our own fate. On the rare occasions that it happens, we feel a sense of exhilaration, a deep sense of enjoyment that is long cherished and that becomes a landmark in memory for what life should be like. This is what we mean by optimal experience (Csikszentmihalyi, 1990, p. 3).

When we enter into states of flow and when these states accumulate over time, we are increasingly motivated and purpose-driven, building a collection of what Csikszentmihalyi refers to as optimal experiences. Pursuing these optimal experiences, or creating for ourselves "what life should be like," is where a model that involves play begins.

Building on play's positive correlations with creativity, I have developed a model in which I posit that play has a dual-phase role in an iterative, cyclical way during the phases of the flow cycle (see Fig. 1). This Play-Flow Intervention Model incorporates concepts from industrial and organizational psychology, social psychology, neuroscience, physiology, and education to synthesize an understanding of how intentional play moves us towards experiencing *flow*.

Play has two key roles in the Play-Flow Intervention Model:

1. To kick-start or catalyze a state in which creativity is unleashed; i.e., pushing an individual from a stagnant or uninspired phase into one that sparks creativity.

2. To prolong this creative output or flow state; i.e., to leverage play to extend the life of that spark, which can build towards a sense of purpose as creative output is realized over increasingly longer periods of time.
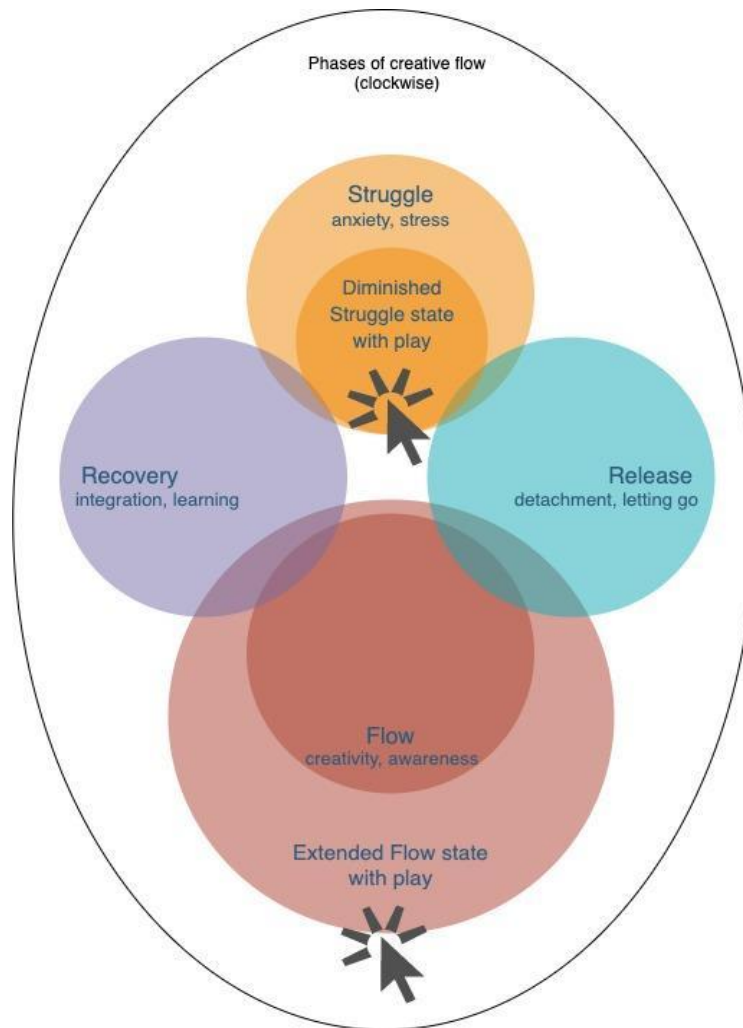
Figure 1. The Play-Flow Intervention Model. While play can be integrated during all four

phases of the flow cycle (defined here as Struggle, Release, Flow, Recovery), it can be

intentionally incorporated as an intervention during Struggle and Flow phases. During the

Struggle phase, play can have a role in shortening or alleviating that experience to expedite

movement into Release via emotional and physiological benefits that reduce stress. During the

Flow phase, play has a positive correlation with creative output, and playful approaches can

extend the length of Flow phase, leading to increased awareness and creativity. The

interconnected factors of play, motivation, and creative output can, over time, lead to increased

optimal experiences and create an overall sense of purpose. Note: see Appendix A for an

expanded figure.

There are four phases to this model, illustrated in a continuous clockwise progression

from Struggle to Release to Flow to Recovery. These phases, known collectively as the *flow*

cycle and first defined by Harvard cardiologist Herbert Benson, describe how one moves towards

and through flow states, adopting a mindset towards growth and embracing challenge (Benson &

Proctor, 2004; Kotler, 2014). I have modified Benson's distinct phases to create overlap between

the phase transitions; this illustrates that there is not always a well-defined start and end time to

each period, but rather a fluid movement from one state of being to the next, perhaps even with

some reverse flux as the individual works through the transition.

At the start, during the Struggle phase, individuals may grapple with anxiety and stress

over a challenge they are facing. There is not a clear path forward, the struggle is demanding

(based on perceived skills or resources available), and it pushes individuals to a place of

discomfort. Here, there is a critical juncture. On one path, an individual might choose to recoil

from the tension and retreat into a comfort zone. This path, while comfortable and familiar, takes

them out of the flow cycle and moves them into another zone in which either the challenge

diminishes or the skills being asked of them decrease (see Fig. 2). This is not to say that choosing

this path is negative or undesirable per se; many of us, both in our daily cycles as well as our

longer lifetime cycles, will move off the flow cycle and into boredom, relaxation, arousal, or

some other state that does *not* ultimately drive us towards Flow. However, choosing this path is

also not permanent. When conditions change, we may find ourselves more readily able (either

through increased skills, decreased challenges, or just a shifted perspective) to elect a different course of action.
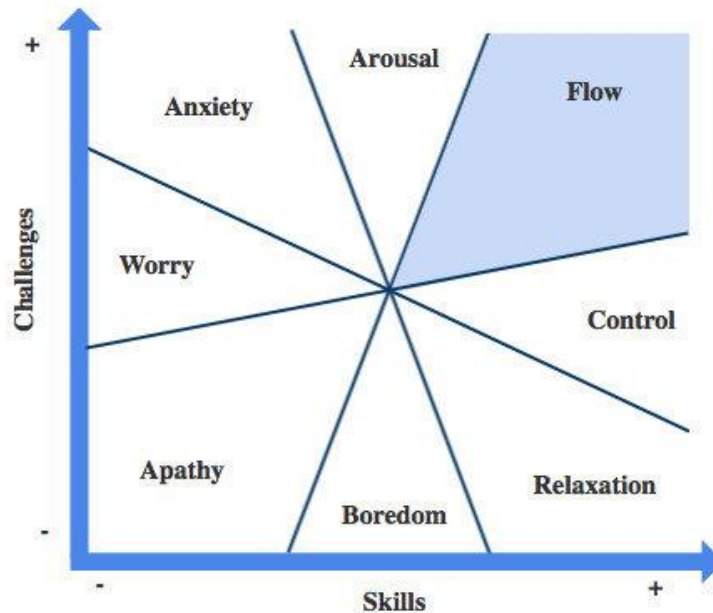
Figure 2. Flow model of challenge-skill balance. Based on the work of Nakamura and Csikszentmihalyi, the flow model posits that when skills demanded are high (+) and challenges faced are high (+), an individual can enter flow. Image source: Simões (2015).

On the alternate path, the path that leads to Flow, we must work through the discomfort, pushing towards a growth mindset that leads to the next phase of Release. During Release, the individual can detach, allowing an emotional letting go of tension and stress. This then permits the third phase of Flow to begin. Here, creativity emerges, awareness is present, and ideas are more readily generated. Csikszentmihalyi (1990) places flow at the critical intersection between skill level being demanded (high) and challenge level being presented (also high). It is important

to note here the subjective nature of the model; what is demanding in skill or challenging to one individual may not be perceived that way by someone else. Therefore, when and how we experience Flow depends entirely on our perception of our context(s). When a suitably challenging problem is faced that demands one's skills - and perhaps even growth and skill acquisition - one moves into a zone of Flow.

There are several key characteristics of Flow, which while being a subjective experience, are consistent elements for individuals in this phase (Nakamura & Csikszentmihalyi, 2014, p.90). These include an intense and focused concentration on what one is doing in the present moment, the merging of action and awareness, a loss of reflective self-consciousness, a sense that the individual can control their own actions, the distortion of time (i.e., it appears to move more quickly), and an experience of the activity as intrinsically rewarding.

Although periods of Flow can be incredibly rewarding and fulfilling, it is not sustainable indefinitely. While I have proposed that play may extend the duration of Flow (the third phase of the flow cycle in the Play-Flow Intervention Model), *all* four phases are important experiences in order to restore our energy levels for future cycles. Now enters the final phase of Recovery. In this phase, integration and learning take place. So much energy is used during Flow that this Recovery phase is important for the consolidation of ideas - a reset of sorts before entering the next cycle.

The value of experiencing the complete flow cycle without skipping any given component cannot be understated. However, what might happen if play was used as an intervention - to diminish or expedite the Struggle, and to enhance or lengthen the Flow? This is where the interventions proposed in the Play-Flow Intervention Model come into effect.

IV.   Intervention 1: Kickstarting creativity, lighting the spark

That energetic spark that comes with feeling inspired by one's work is frequently noticed not by its presence, but rather its absence. Depending on the discipline, this lack of spark may be identified or understood differently. For example, writers may complain of "writer's block," or the feeling of an inability to generate any new words. Professional athletes might "fall into a slump," professionals may be "in a funk," actors may feel they are "lacking inspiration," and others may identify with being "in a rut." All of these emotional experiences are part of the Struggle phase - that period of discomfort and tension when creative output is lacking.

How individuals work to transition out of Struggle and into Release (see Fig. 3) can vary greatly. One place to look for inspiration is through the words of well-known creatives who have observed and documented their processes. Author Cathy Johnson has written of how freely wandering without a destination or objective has opened up her awareness. Molecular biologist Kary Mullis has described how intentionally exploring ideas from different disciplines has helped to foster curiosity and take on new perspectives. In *Creators on Creating* (Barron et al., 1997), where these and other essays are shared, the opened mind - the mind that has worked through the phases of Struggle and subsequent Release towards Flow - is described as such:

> The opened mind is relaxed and playful. It is filled with curiosity and wonder...It loves to get off the beaten track, to explore paths that are not the ones taken by social convention. Playfulness is sometimes important. The opened mind likes to play with an idea or object, and enjoys looking at it as if for the first time...The opened mind can wander playfulness into areas others do not take seriously, and return with creations that must be approached in all seriousness. (p. 57)
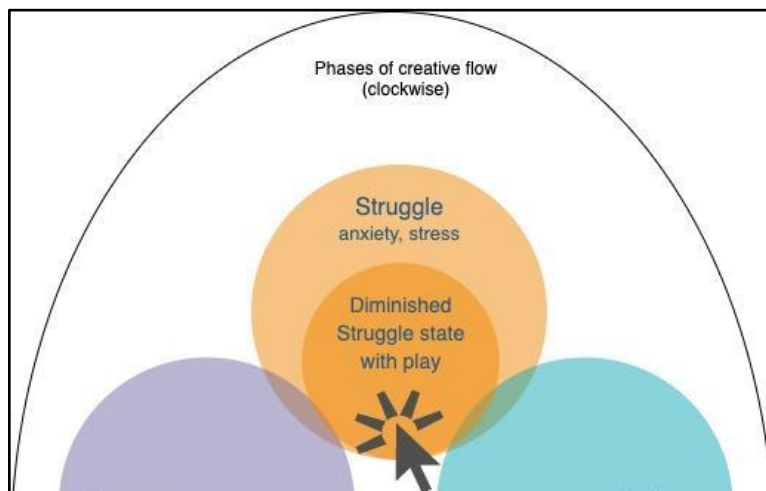
Figure 3. The first intervention point of play in the Play-Flow Intervention Model is during the Struggle phase, propelling movement into the next phase of Release.

The Play-Intervention Model proposes that playful approaches can start to unleash the mind from being mired in Struggle, whether through physical movement, interacting with others, trying new games, or role playing. This is in large part due to the emotional benefits that emerge when we engage in play; play as an intervention during Struggle may help alleviate the intensity or shorten the duration of this phase. This can happen even in micro-doses. For example, in workshops I have facilitated, I have observed that short, playful endeavours like making silly faces or doing jumping jacks have immediate and positive psychological impacts that can shift our bodies and our minds.

Play has the ability to unlock powerful mental and emotional reserves. Bateson et al. (2013) describes play as "sensitive to prevailing conditions and [occurring] only when the player is free from illness or stress...play is an indicator of well-being." These researchers also make connections between play and a prevailing positive mood. This well-being or positive

physiological state can also be seen as something that results from engaging in play; for example, Brown, S. (2008) suggests that if you are having a bad day, feel better by engaging in play. Like the chicken and the egg analogy (*what comes first?*), whether you need to be feeling well in order to engage in play or whether play leads us to greater wellness is almost a moot point. They perpetuate and build on each other and are intrinsically connected. Burke (2016) also sees workplace play as supporting "engaged, positive, and energized people," and the positive emotional well-being that results from play can lead to heightened creativity. Given that "fun" is a critical definer of play, things like laughter and enjoyment are frequently associated with play as well. Physiological, emotional, and mental well-being results from play; creative ideation, which necessitates an open mind and a sense of psychological security, hinges on this well-being.

A second key connection between play and reduced Struggle is that play has distinct physiological effects on individuals. The positive affect resulting from play increases endorphins and oxygen as well as blood flow to the brain, which is correlated to creative thought processes (Petelczyc et al., 2018). Keil (2011) cites studies in which the degree of play in species is correlated to their brain size. Further, play stimulates neural growth in the amygdala (the area controlling emotions), promotes prefrontal cortex development (responsible for cognition) and, overall, has a positive correlation with emotional maturity. Engagement of adults in play is connected to physical well-being throughout life (van Leeuwen & Westwood, 2008) and has a positive impact on the capacity for greater learning in multiple dimensions (Rieber, 1996; Kolb & Kolb, 2009). Because of the positive neurological effects of play, a connection can be made to the physical well-being and open-mindedness necessary to move into a place of creative output.

Play by its nature is highly interactive - whether with the activity itself, or with others. When this interactivity is experienced in the context of interpersonal collaboration, it helps to build connections among groups and may propel us from Struggle into Release. The social, interactive nature of play builds *relatedness*, which is a basic psychological need of feeling connected to others; relatedness is one factor in increasing intrinsic motivation (Di Domenico & Ryan, 2017). Therefore, the Play-Flow Intervention Model proposes that leveraging play specifically during Struggle might increase motivation at a time when it is diminished, which in turn could advance movement through the flow cycle.

When we engage in play with colleagues, it can facilitate conversation (work-related or otherwise) that builds bonds, encourages trust, and can invite opportunities for creative ideation - both because of a resultant emotional state and because of the potential to land on unique solutions in any given environment. Sometimes, stepping away from our typical work environments helps transition us out of feeling stuck and moves us towards a new creative space. There is a story from Richard Feynman about how he calculated the motion of mass particles based on hanging out in a cafeteria with someone who was fooling around and throwing plates in the air; the movement and wobbling of the plates sparked Feynman's curiosity (Barron et al., 1997). Would Feynman have developed that same formula sitting alone in his study? Possibly, but it might have taken a lot longer sitting in the Struggle phase before arriving there. The role of intentional play and playful environments, such as in the example of Feynman, is that these contexts can more quickly reduce the stressful physiological and emotional state of being creatively stuck and move us towards Release.

V.　　Intervention 2: Prolonging creativity, when a playful mindset builds purpose

During the Flow phase that follows Release, creative output is maximized as minds open to possibility and work progresses with heightened focus. Many individuals deliberately seek out Flow, looking to capture this state - and here is the second point of intervention for play, in which play might be used to extend Flow over increasingly longer periods of time. When play is interjected during Flow, especially through play-based behaviours (e.g., exploratory play, constructive play, role play, social play, playground), it is likely to elicit continued creativity and awareness (see Fig. 4). The design intention is that a positive feedback loop develops in which play fuels creative processes, thereby opening up the possibility of incorporating further play and building continuous cycles of creativity within a single Flow state.
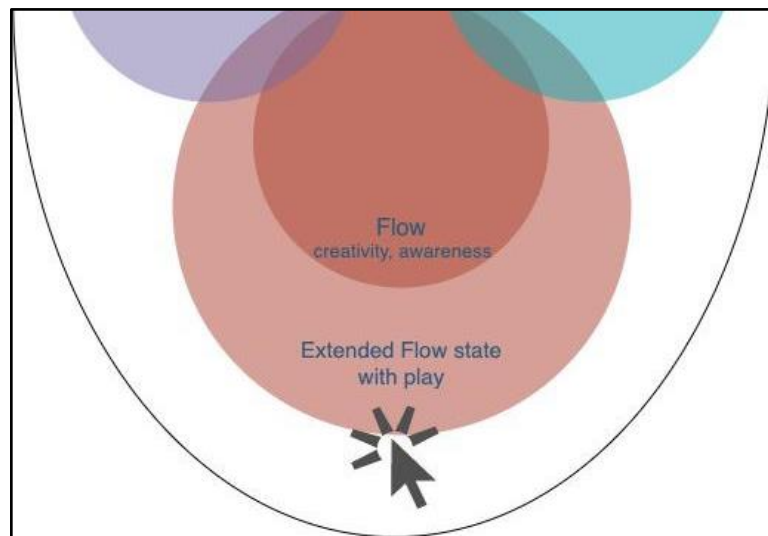

Figure 4. The second intervention point of play in the Play-Flow Intervention Model is during the Flow phase, leveraging play to extend the experience of Flow and resultant creative output.

Mainemelis and Ronson (2006), researchers who explored play in the context of workplaces, found that "by temporarily suspending ordinary conventions, structural obligations, and functional pressures, and by encouraging behaviors whose value may not be immediately evident, play stimulates, facilitates, and even rehearses creativity." These researchers found that play had a direct impact on five cognitive processes connected to creativity: problem framing, divergent thinking, mental transformations, practice with alternative solutions, and evaluative ability. Further, hands-on, experiential object play has been shown to support the development of idea generation and problem-solving (Brown, S., 2008; Brown, T., 2008). There is a reciprocal connection between creativity and play in terms of this experiential learning; the curiosity and experimentation that can drive play (as well as creativity) works to encourage both creative problem-solving and continued playful exploration. Through an analysis of adults participating in various occupations, Blanche (2007) found that process-oriented (as opposed to product-oriented) creativity was a form of adult play, in which adult participants found great enjoyment, freedom, and heightened self-awareness.

When play and creativity are intimately connected during Flow and become ingrained as a process, a play-oriented mindset may begin to develop. And when individuals embrace playfulness and adopt play through the flow cycle, their increased creative output has the power to increase intrinsic motivation, ultimately driving purpose. The creative generation that comes during Flow helps us mentally, emotionally, and physiologically to feel that the work we are engaging in has meaning and significance.

VI.   On embracing play and becoming playful

The intention of the second intervention point (i.e., during Flow, see Fig. 4) in the Play-Flow Intervention Model is that realizing play in that phase might cultivate playful orientations

over time. The habitual intervention of play during Flow may foster a recurring cycle where creative output nurtures continued playfulness, which in turn leads to ongoing creativity. While *play* can be pursued as specific actions or endeavours, playfulness is a mindset of openness, experimentation, and vulnerability. It is a readiness or "default state" in which the path of play is readily available.

In describing playfulness, Proyer (2017) characterized playful individuals as observant, able to evaluate situations or challenges from different perspectives, adaptable, and able to reframe monotony or stress into interest or levity. Proyer also found that while these traits are characteristic of playful personalities, playfulness overlaps with (rather than supplants) the "big five" personality traits, often referred to as OCEAN: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Thus, playfulness, rather than being a core trait, might inform or be associated with particular aspects of the OCEAN model. For example, playful individuals might be more likely to demonstrate higher levels of openness (connected to inventiveness and curiosity) and lower levels of neuroticism (connected to sensitivity and nervousness). In addition, because play has a positive correlation with creative output, happiness, and release of stress, the playful individual over time may experience shifts on those OCEAN dimensions. In one study of playfulness against the big five personality traits, cheerful and uninhibited playful individuals were correlated with greater extraversion and lower levels of neuroticism; being expressive through playfulness was also correlated to higher levels of extraversion (Proyer & Jehle, 2013).

Within the Play-Flow Intervention Model, playfulness may have a role in fueling movement throughout the cycle, predisposing an individual towards engaging in play. The characteristics of playfulness, such as finding whimsy in the everyday, playing with ideas, engaging in play with others, and a tendency to embrace levity, would all support a diminished

state of Struggle. The anxiety and stress that can arise during Struggle might be alleviated by both the playful individual's mindset and the pursuit of play itself, thus propelling them into Release more efficiently than the non-playful individual. Later, during the Flow phase, playfulness may help to extend periods of creativity, perceptive observation, and awareness.

One might question how best to become playful, especially when playfulness is not a particular individual's tendency. If playfulness generally supports movement towards Flow and sustained experiences in that phase, then how can we foster playfulness in ourselves and others? By shifting our attention and intention towards playfulness, and by being mindful of both our state of mind (e.g., open versus closed, light-hearted versus sombre) and our actions, we can begin to see to what degree we are inviting playfulness into our lives. If we see playfulness as something that might be practiced and learned over time - perhaps with effort and intention to start, but gradually becoming increasingly ingrained in our patterns of life - we might start to move towards becoming playful.

In Brian Little's work as a psychologist, he explores forces that shape personality (Little. n.d.). The first force, or our first nature, is rooted in the biogenic (genetic, evolutionary, and biochemical) influences that shape us. There are also external sociogenic forces in our environment, such as our families and culture, that influence us and account for what he refers to as our second nature. For many individuals familiar with the phrase, "nature versus nurture," the understanding of personality has stalled here. Little, however, explores a third nature by which we are formed: the idiogenic - things we deliberately learn, control, and care about (Dowden, 2018).

This third nature opens up the possibility for change - the idea that we might learn other ways of being rather than resigning ourselves to whatever DNA we were vested with at birth, or

the impact of the families or cultures in which we were raised. The work of Ericsson et al. (1993) and Macnamara et al. (2016) provides evidence for the value of deliberate practice for elevating performance; when we dedicate time and energy (mental, physical, or otherwise) towards practicing a skill, we will learn it in time and may even master it, even if it was not an inherent talent. Deliberate practice, in which focused effort, autonomy, and feedback (shared elements with flow) are channeled towards a well-defined goal, is vital for mastery of a given task or discipline. And when *playfulness* is the ability we wish to master, practice might be the key to shifting ourselves towards that goal. This means undertaking play-based behaviour as often as possible, both deliberately scheduled and spontaneously, and being mindful of opportunities to incorporate play-based approaches across all facets of life. In time and with the accumulation of intentional practice, playfulness begins to emerge as an enduring mindset and way of being - and it is at that point that we can start to create circles of play that radiate out from ourselves.

VII.   Individual play, collective play

Play as an intervention to kickstart and/or prolong creativity can be difficult to implement as an individual; it requires both attention and intention. When we find ourselves entering into periods of mental slowing or stagnancy, summoning the motivation to move into a different headspace can be challenging. In Joseph Gordon-Levitt's (2019) TED Talk, *How craving attention makes you less creative*, he describes flow as focused attention on just one thing without distraction from external influences, echoing the words of Csikszentmihalyi on Flow state. The more regularly one is able to have this focused attention, he argues, the happier you will be. It takes intentional practice to do away with distractions and pay attention; it's not always easy, and to pay attention like this requires regular, sustained effort.

One way to help achieve this, Gordon-Levitt argues, is to not see other creative people as competitors, but instead to view them as *collaborators*. When we have collaborators, it becomes easier to focus, as the group collectively pays attention to a shared thing they are making or creating together. This creative output becomes part of something larger than any given individual, and the collaborators can shield each other from anything else that might grab someone's attention. As a team, the creative collective also pays attention to, and mutually reacts to, each member of the group. Collaborators can help keep each other in Flow and work together to sustain this state over longer periods of time. Being together - whether physically in person, or virtually through online connection - is a critical component of collective creativity.

Because play is also an inherently interactive experience, taking play from an individual space to one that is shared can also propel individual creative output and flow to the collective. We become able to share this amplified playful flow state with our collaborators. When we interact with others, either separate from work or in playful approaches to our work, we create the collaborative conditions that are needed for collective creativity. The progression from individual awareness to shared presence creates the generative space in which co-creation can emerge (Scharmer, 2000); therefore, play, through its interconnected nature, may facilitate new avenues for groups to advance dialogue, thought processes, and creation. Brown, T. (2008) further explains the connection between group play and creativity by saying, "We need trust to play, and we need trust to be creative...there's a connection." The interpersonal nature of play intrinsically links it to collaborative creativity. And so, as we seek to build opportunities for play and playfulness into our lives as well as to support those around us in doing so, we can begin to ask, "What would a playful group culture look like?" And, "How might we design teams and organizations where playfulness is the norm?"

VIII. Designing for systemic change: what is a playful culture?

Leaders carry power and influence, and they set the tone of the groups they lead. In order for organizations to successfully embed play into processes and practices, leadership must embrace the adoption of a playful culture. In the literature review of Petelczyc et al. (2018), the authors consistently found that workplace play is more likely to occur when organizations support it and when leadership demonstrates it (i.e., if they display playfulness as a trait). However, rather than viewing culture as dictated from a top-down approach, creating a culture of play needs to be approached from both a leadership angle as well as from the ground up. In conversation with Chris Henry, who works in Google's Toronto office, he explained an important concept: that *every* individual shapes culture, not just the leaders writing the mission statement. He described that in his experience, leadership sets the environment and gives permission for a certain culture (for example, through modeling or providing opportunities to practice playfulness), but every individual must take ownership and has autonomy in terms of building the culture as well. If an organization aims to create the conditions under which any given team member believes that not only is it "okay to play," but that playfulness is beneficial and ultimately drives increased creativity, each individual must exercise their autonomy in terms of practicing that conviction throughout their day.

The importance of autonomy within structured leadership is further emphasized by Amabile (1998), who describes three components of creativity that leadership can influence: expertise (technical, procedural, and intellectual knowledge), creative thinking skills (how flexibly and imaginatively people approach problems), and motivation (an intrinsic passion or drive to solve problems). Things like restricting freedom and removing individual autonomy, not providing appropriate challenges (or conversely, giving too much), pushing long hours with

impossible-to-achieve deadlines, relying on external motivators such as money, and not paying attention to team fit and support can kill creativity.

Fostering a shared mindset oriented towards play thus requires systemic buy-in, and when whole teams take on play-based approaches that lead to increased creative output, there is real value for organizations. This value comes both in the form of heightened intrinsic motivation as well as financial return when creative teams deliver innovative solutions that lead to positive change, such as improved internal processes, employee engagement, consumer adoption, or even industry disruption.

Quantifying this value or defining a return on investment (ROI) of creativity is outside the scope of this paper. However, corporations can elect measurable metrics connected to creative idea generation and build a persuasive business case for a playful culture leading to increased creativity. In an Adobe study of several hundred global senior executives (Forrester Research Inc., 2014), they found that creative companies are typically invested in inspiring others (e.g., customers or clients) and are commonly defined by qualities such as risk-taking, comfort with failure, and collaboration. These same creative companies are statistically more likely to enjoy greater market share and competitive leadership, achieve more revenue growth, and have a superior employee experience when compared to less creative organizations. Their leaders are encouraged to build creative organizational cultures and invest in them - whether through corporate training, investment in infrastructure such as technology that supports greater creativity, rewarding risk-taking and innovation, or prioritizing creative projects and processes.

The value of play is also tangible in its connections to the human capital of organizations. Mainemelis and Ronson (2006) found that organizations that valued play created space in which employees could better resolve interpersonal conflict or tension. In these spaces, play helped

encourage free expression of alternate ideas and processes, leading to increased creativity. Brian Sutton-Smith, whose research on play has spanned multiple decades, similarly found strengthened interpersonal dynamics in groups of people who engaged in play (Sutton-Smith, 1997).

Becoming playful or exhibiting collective creativity at work does not typically just happen; teams and organizations must create frameworks within which play and playfulness are integral parts. Intentional, playful work design has been shown to increase daily engagement and drive creativity (Scharp et al., 2019); while designing these environments may be easier for individuals with naturally playful personalities, it is feasible for all. In Ritchhart's (2015) work on creating cultures of thinking, he discusses how cultures are established; for each of Ritchhart's aspects of culture, organizations can make choices to foster a culture of *play*. This then becomes a way in which play is both practiced (through activities or exercises) as well as being inherent in the ways in which work is approached (a playful mindset). There are a multitude of ways in which leaders or organizations can work towards building a playful culture; however, it is not as simple as someone creating a team value of "playfulness" or telling people to use the breakout rooms to play games. Ritchhart uses *cultural factors* as a means of outlining how any team or leader can thoughtfully consider how these factors might support play. While it is essential for leadership to "buy in" or otherwise create the appropriate conditions for certain environments, all team members have a role in asking critical questions that inform the following cultural factors:

- *Time:* How might time be allocated, both separate from work tasks as well as embedded during the workday, to encourage play? Will there be appropriate opportunities in the schedule during which play might be explored?

- *Modeling:* How will team leaders and organizational leadership set the example of play? What specific practices, activities, or ways of working might encourage others to embrace playfulness?

- *Language:* Both in speech and in writing, how can play and/or playfulness start to permeate the ways in which a group works? For example, Schmidt and Rosenberg (2014) describe how the common "Error 404" web page message, while it could be communicated in a dry or practical way, was conveyed through more informal/fun language and doodles - weaving playfulness into a seemingly straightforward message.

- *Environment:* How might the physical workspace encourage play or demonstrate playfulness? Are there breakout spaces where collaboration and prototyping can take place? What recreational play choices are made available to teams?

- *Interactions:* How can the interactions among team members and others within an organization encourage each other to embrace play? And how can play support the formation of strong interpersonal relationships and interactions among all individuals within an organization?

- *Routines:* What types of predictable practices or ways of doing things could place play at the centre? Are there playful diversions from work that could become routine (e.g., Google has culture clubs, separate from work), and what work-embedded routines (e.g., creative brainstorming) might encourage play?

- *Expectations:* How will an organization's values and mission reflect play, such that the beliefs around what is expected of others in an organization demonstrate a value placed on play?

- *Opportunities:* What conditions or circumstances might encourage play - either for individuals or teams? How will organizations create these opportunities?

When people are attuned to these cultural factors, the likelihood of pushback (e.g., perceptions of "playful" individuals at work being off-task, distracted and/or distracting to others, or unprofessional) can be mitigated. Team members, when coordinated through shared cultural factors, have the ability to work together towards both process and product-related goals. When leaders communicate the benefits of play as part of the culture, this further supports team and organizational adoption of practices and mindsets that encourage play. The benefits of a playful culture are recognized both internally among teams as well as externally. Those organizations that embrace play at work are more likely to be viewed by employees as having a friendlier and more committed culture, and to demonstrate more flexible decision-making, openness, intrinsic motivation, and collaboration when compared to organizations that do not endorse or practice play (Petelczyc et al., 2018).

In spite of the emotional, psychological, and physiological benefits of play - as well as the organizational value or ROI placed on creativity emerging from play - there remains a challenge in creating lasting change and cultivating playful cultures that will endure through transitions such as time passing, staff turnover, or organizational restructuring. All too often in workplace learning and development or training initiatives, an idea that is exciting may not be implemented in an enduring way. Perhaps teams try new behaviours for a month, or even six months or longer. But like New Year's resolutions that may result in treadmills becoming glorified laundry racks, these ideas around teams embracing play and creativity may lead to dusty game rooms and unused colourful post-it note collections. To address this challenge and

present a model by which change might be successfully implemented, Perkins and Reese (2014) wrote about four key factors that will be in place when change "has legs" - that is, when it is most likely to be enduring: Frameworks, Leadership, Community, and Institutionalization.

The first of these factors, Frameworks, requires adapting a model such as the Play-Flow Intervention Model for implementation within a given team. By creating a structured framework, it can speak to the needs of a particular team or organization and introduce guidelines and practices to follow that would both indicate goals (such as increased play-based approaches) as well as metrics of success.

Secondly, Leadership plays a key role in creating change; influence must occur at multiple levels. Perkins and Reese define this as change supported by both "political visionaries" (senior leaders like CEOs who are advocates at a high level for an initiative) as well as "practical visionaries" (on-the-ground leaders like managers, who would lead and organize teams in the change being implemented).

The third factor, Community, is grounded in transparency; here, initiatives are steadily expanded from early adopters outwards. For a culture shift towards play to be successful, a collective buy-in would be important; however, it is likely unrealistic that every employee would have an equal stake at any given phase. By openly communicating both the successes and failures being experienced, inviting dialogue, and engaging a wide group of stakeholders (including the organization) in change, there is a reduced likelihood that people will feel alienated or excluded from a culture shift - a response which can be detrimental to long-term impact and change.

And finally, Institutionalization demands that an enduring change be bigger than any given team or leader - that is, staff turnover should not be detrimental to organizational culture.

This means that organizations need to consider how to make a culture of play and creativity written into every aspect of how they function - something that would be reflected in mission and values, hiring processes, communications, and all business practices.

IX.   The flip side of play

In Steve Keil's TED Talk on play (2011), he quotes Dr. Stuart Brown, founder of the National Institute for Play - who in turn quotes Brian Sutton-Smith, a pioneering researcher in play - saying, "The opposite of play is not work. The opposite of play is depression." Sutton-Smith (1997) also labels play as "the willful belief in acting out one's own capacity for the future." As such, engaging in play might be considered one effective measure of hopefulness. In the absence of hope, people inevitably fall into darkness and lose drive and purpose. In an interview with Dr. Brown at Stanford University, he further elaborated:

> Play is a survival drive that is necessary for adaptation, flexibility and social learning. Play helps us belong in the community, develop the ability to suppress unwanted urges, and regulate our emotions. (BeWell, 2015)

Based on such social-emotional benefits, one might assume that play would have universal uptake with little push-back. For if the opposite of play is depression, who would elect to walk that path?

In reality, play may not lend itself well to all situations, and there is often resistance to embracing playfulness, particularly at work where socially constructed norms of hierarchy, power, and seriousness may impede the uptake of play. Depending on how play is being practiced, cultural differences or contrasting senses of humour may be exacerbated by play; without being properly addressed, individuals that feel excluded may shut down mentally or emotionally, leading to fractured teams. Designing inclusive environments in which play is welcomed yet also acknowledges diverse perspectives is crucial; it is why every team member is

needed when addressing, and subsequently implementing in a mutually agreeable manner, each of the factors for playful cultures presented in Section VIII.

Petelczyc et al. (2018) point out that more research is needed into "the dark side of play;" that is, it is important to consider what the unintended consequences of fostering a playful group culture might be, particularly in a professional context. While most academic research and popular literature on play have focused on its benefits in an effort to get adults to be more physically active, find levity and positive humour, and engage with new ideas, a corresponding exploration of drawbacks of play is notably absent. However, there is anecdotal evidence of s potential resistance to play. For example, playfulness and creative processes are often fun but may also be seen as frivolous. Scott Eberle, the editor of the American Journal of Play, says that some may see play as less "respectable" (Neyfakh, 2014), perhaps more so in capitalistic or hierarchical environments where order and reaching quantitative achievements are valued. In conversation with Kirsten Anderson, a professional coach for playfulness at work, she also described frequent resistance within corporate environments from individuals or teams concerned about the lack of seriousness or conscientiousness that may come about if people are engaged in play. While this perception could be countered with research (such as that previously presented, outlining creative benefits that lead to collective innovation and intrinsic motivation), it is something that must be attended to if one is attempting to create playful cultures universally. Further, individuals or teams may enjoy short-term benefits of play but ultimately struggle with guilt, finding it distracting, inefficient, and hard to balance against needs for productivity. Play uses employee resources including time, energy, focus, and attention; while there may be an argument that resultant emotional well-being and creative output may have a net benefit of time

gained (e.g., by avoiding mental health days, frustrated meetings, etc.), there is still a potential drawback for some teams.

Certain industries may find that play-based approaches are not appropriate, or that playfulness must be integrated intentionally only at key moments as opposed to being fully adopted as an enduring mindset. In some contexts, such as government or law, integrating play or playfulness may be detrimental; finding whimsy and levity in unusual circumstances is likely not something that would be appreciated when protocols need to be enforced. I recently toured a new open concept building for employees of a national museum. It was designed to promote collaboration, with flexible seating, open spaces for gatherings, and modern breakout rooms for teams to work together on projects. However, they seemed overwhelmingly miserable with the set-up, craving solitude, quiet, and individual space to work alone or perhaps methodically with coworkers as needed. As such, play may not be perfect for everyone - or at least, not at all moments. The ways in which these individuals or teams realize creative output may arise from a different conduit. However, for those teams in which there is space and flexibility for playfulness, play has the potential to create openness for great opportunity and innovation.

X.   Conclusion & next steps

Imagine a time and place in which play was widely adopted as a common practice across all disciplines, generations, and walks of life. Play would be encouraged and practiced, both embedded into work processes as well as in our daily and recreational activities separate from work. What would that look and feel like? What would it take to get there? How might play drive both individual and collective purpose in life? As we consider the future of work, we recognize that technology and innovation will shift the nature of our jobs, our connections with others, and the systems in which we function. Antiquated, industrial-age assembly lines can now

be automated; machine learning, with its capacity to analyze massive datasets to rapidly deliver information, is supplanting manual labour; having globally dispersed colleagues is no barrier to communication. This opens up the possibility for paradigm shifts in which models, such as the Play-Flow Intervention Model, may have increasing importance as greater attention is placed on intrinsic motivation and generative space for human creativity.

Change is not an overnight process, and incorporating the intervention of play, whether during challenging periods of Struggle or the creative phases of Flow, takes intentional energy. However, when the ultimate goal is finding one's spark - that simultaneous positive physical energy, mental engagement, and emotional connection - it is an enormously rewarding endeavour.

The Play-Flow Intervention Model is designed as one framework through which individuals or teams might start to identify tangible periods during which the incorporation of play might spur heightened creativity. Over time, repeated experience with play might lead to heightened playfulness and ultimately drive one's sense of purpose. One goal in developing this model was to inspire people to reimagine what our future work lives may look like - a context in which play is often lacking - so as to shift our experience of work, whatever that might entail.

Adopting the model requires more than just reading about it; it requires both targeted intentionality for a given context as well as practice. Without coaching and feedback attached to deliberate practice, it is unlikely that a given individual or team would know how to integrate play into their lives if they are not already doing so. I currently coach and train others through professional development for educators, and in future I hope to bring the Play-Flow Intervention Model into training sessions such that they might realize its benefits. Given the transdisciplinary nature of both the framework and its applications, next steps also involve sharing this model with

teams in a broader range of workplace environments beyond K-12 education. To support

organizations seeking to maximize teams' collective creativity through play, my vision is to

build a learning and development or coaching program that would focus on educating others

about these concepts, providing both tangible exercises that can be implemented in the short

term, as well as longer-term mindset shifts needed to move in this direction.

Teams also need to be able to identify for themselves and others what elements of their

work processes are working, and which ones are not. Part of this learning program needs to focus

on evaluating the success of implementing play, to discern whether a shift towards play truly

results in a thriving, creative work environment. This may be an opportunity to further develop

an ROI or business case to support the adoption of play, provided it is fostering more motivated,

engaged employees or generating increased creative output in quantifiable ways. It is important

to look critically at processes and practices and evaluate the impact - both positive and negative -

of play-based behaviours. While outside the scope of this Synthesis, any future coaching

program for play must also assess its efficacy. In doing this, organizational leaders should see

real and measurable benefits to engaging in a coaching program for play - whether through

morale and communication, and/or financial success through highly innovative solutions

generated in these teams.

Play as an intervention to kickstart creativity and then prolong creative flow has myriad

benefits, ranging from mental well-being, to learning and creativity, to the social bonds that

come with it. Through play, we generate our spark. And by spreading play to our teams, we

foster that culture, thereby improving the ways in which we collaborate and exist together.

A final direction for exploration is how this knowledge and training might have positive

applications in other areas of our lives. The family units in which we live, the sports teams or

book clubs or neighbourhood social groups in which we participate, and even the spontaneous groups that arise at conference tables or events we attend might all be seen as functional teams. When we ask ourselves what might happen if we were predisposed to play in these settings, we might start to move towards heightened creativity in every aspect of our lives.

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Appendix A: Expanded Figure (Play-Flow Intervention Model)

Phases of creative flow
(clockwise)

Struggle
anxiety, stress

Diminished
Struggle state
with play

Recovery
integration, learning

Release
detachment, letting go

Flow
creativity, awareness

Extended Flow state
with play