

# A Naturalistic Philosophy of Play

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Dissertation submitted in partial fulfillment of  
the requirements for the degree of Doctor  
of Philosophy in the Department of  
Philosophy in the Graduate School  
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2015

ABSTRACT

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# ABSTRACT

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This is a philosophical work on the subject of play. Organized around a handful of questions, the thesis approaches inquiry by first integrating empirical lines of research and then applying the methods of philosophy. The first chapter is an introductory one that serves to motivate the project and outline its central features. Chapter 2 concerns the question of why humans play from an evolutionary and psychological perspective. The conclusions reached in this chapter form the basis of chapter 3's ethical discussion of why and how we ought to play. Chapter 4 uses an interpretation of Jean Piaget's *The Moral Judgment of the Child* as a stepping stone to an investigation of how play and moral development are related. Chapter 5 addresses the metaphysics of play by critiquing extant philosophical and biological accounts of what play is before advancing a novel theory based on active engagement and frivolousness. To conclude the dissertation, chapter 6 ties together themes from various chapters.

# CONTENTS

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Abstract.....	iv
List of Figures.....	vi
Acknowledgments.....	vii
1. Play hides, philosophy seeks.....	I
2. Why we play.....	7
3. Why we ought to play.....	63
4. Play and moral development.....	105
5. What is play?.....	155
6. A philosophy of play.....	195
References.....	200
Biography.....	212



# LIST OF FIGURES

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Figure 1: Lorenz's hydraulic drive model. The water, labeled 'drive', represents activity-specific energy which accumulates in the reservoir. It applies pressure to the spring-loaded valve at the bottom of the tank as does the external stimuli, here represented by the weight. A sufficient amount of force releases the water into the collecting pan, and when water flows through the different holes different behaviors are elicited. Image from Berrige (2004), modified from original source in Lorenz and Leyhausen (1973).....24

# ACKNOWLEDGMENTS

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I would like to take this opportunity to thank all of those who helped make this dissertation happen. My parents, Ted and Ellen, and sister Margaret for their unwavering support. My dear friend Steve Martin and fellow office mates Gordon Steenbergen and Matt Braddock for providing equal parts feedback and welcome distraction. Special thanks to my dog Jack who has taught me more about play than any book, and to Sara Bernstein who got me started on this project. Thanks to my adviser Owen Flanagan and the rest of my committee, David Wong, Wayne Norman, Michael Ferejohn, for all sticking with me. I especially want to thank everyone whom I've cited for making this work possible and everyone else who has helped me along the way (there are a lot of you). Your contributions could not be more appreciated.

I'd also like to thank the Duke Philosophy Dissertation Seminar for giving me helpful feedback on two of my drafts, as well the Duke Philosophy graduate students for their feedback on my Work-In-Progress presentation, "Philosophy of Play: Play Hides, Philosophy Seeks". Thanks to the Duke Center for Cognitive Neuroscience for



their feedback on my presentation, “Why We Play”. Lastly, thanks to Georg Duffner for making the beautiful and comprehensive EB Garamond an open-source typeface.

## CHAPTER I

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# Play hides, philosophy seeks

### *A Non-Traditional Inquiry*

I could tell you all about the importance of play, how it can enrich one's life, provide meaning through self-expression, through self-realization, how it can make one a better student, a better friend, a better person, or why no one should live without it. I could tell you all these things but I doubt that it would make a difference to a staunch traditionalist who doesn't see the value of this admittedly non-traditional philosophical topic. Play is not one of the "chosen" dialectics, and there's nothing that I can say that would move it from the periphery to the core of philosophy or to make its history anything more than a handful of passing remarks separated by long pauses. The difference then between those who will get the most out of this dissertation and those who will be dismissive of it comes down to how one perceives the philosophical silence on the matter. If you see it as evidence that nothing more needs to be said, then I have nothing for you. However, if you embrace expansion and inclusion in philosophy, and you see

the worth in finding new places for philosophy to take root, this silence should be seen as nothing less than an enthusiastic invitation to speak and to investigate what can be said.

## WHAT IS THERE TO SAY?

As I was piecing together what would later become the chapters of this dissertation, I tried to imagine what fundamental questions a naturalistic philosophy of play should seek to answer. I arrived at the following list:

What is play?

Why do we play?

Why should we play?

How should we play?

What is the relationship between play and moral development?

This dissertation is an attempt to answer these five questions as best as possible by any means possible. We will go where the questions lead us, which will often be outside the proper bounds of philosophy. However, I'm of the conviction that it's not the job of philosophers to mind boundaries; it's to seek out the best vantage points wherever they may be. As it so happens, some of the best views of play come from evolutionary biology, ethology and psychology. So much the worse for the traditionalist approach.

## *The Whys of Play*

To begin the project, we will start with the twin queries of why we play and why should we play. The first question concerns a “scientific” *is*, the second a “philosophical” *ought*, yet the methods of philosophy can inform the first question, and a psychological account of play can inform the second. We will be faced with the task of bridging the normative-descriptive gap, and despite what critics say it's not a matter pulling a rabbit out of a hat or making something magically disappear. It requires a little care and nothing more. It's in fact the ethical non-naturalists who are in need of magic, for they claim that they can paint normative portraits without looking at their human models. Though talented, these painters are not of a supernatural variety; though pleasing to the eye, their portraits are not *of* the commissioned subject. If any idealization is to capture a likeness, it must be drawn from a picture of what human beings are actually like, and we have no better picture than the one science provides.

Of course, this defense of empirically informed ethics is preemptory with regard to the subject at hand. Such detractors might even be a welcome addition to a play literature, scant as it is, in which metaphysical issues overshadow if not entirely eclipse ethical ones. Perhaps the most systematic discussion of the ethics of play comes in a short passage in Plato's *Laws* in which he discusses how the play of children ought to be shaped to further their ends. To say this is the best philosophical discussion of

play and morality is not to say much. It's insightful but not particularly profound, and it's exceedingly brief, in dire need of a Whiteheadian footnote.

### *Play and Moral Development*

In the fourth chapter, we will investigate the relationship between play and moral development. To start, I revisit Jean Piaget's seminal *The Moral Judgment of the Child* (1932/1965) in an effort to clarify his views about the relationship between children's games and moral cognition. This exegesis serves as a starting point for multiple lines of inquiry that include looking at toy negotiations between toddlers, the normative structure of canid play, the values of cooperative and competitive play, and the refinement of moral cognition by pretend play.

That play is important to moral development is clear; it's too socially rich to be an epiphenomenon. Just as toy bows and arrows train the young archer, competitive, cooperative, and solitary play prepare the child for an adult life in similar contexts. The genius of play is that it provides children with something to care about, with problems to solve, and conflicts to diffuse, all without significant or permanent consequences.

## *Metaphysics of Play*

Of all the questions surrounding play, the question of what it is has garnered the most philosophical attention, and of all the voices that have spoken up about the metaphysics of play, most agree that play is autotelic, done for its own sake. While the philosophical accounts of play are of limited variety, biological accounts continue to proliferate with each one capturing something different about play and none of them capturing what is unique to all and only play. While there is something to be learned from both discourses, what's needed is a new approach. I find that by looking at the necessary goals and means of play activities we can see that they require active engagement and that one have no goals or goals that are of no value. This is the mark of play, and the activities that satisfy it to the greatest extent are paradigmatic examples, typical exemplars in comparison to which other activities may be considered play.

## *A Naturalistic Philosophy of Play*

This is not the first endeavor into the philosophy of play, but to my knowledge is unique in its approach and its subject matter. It takes the perspective that science and philosophy are continuous with one another, and that when they share a research program it's imperative that we set aside institutional divides. Given our guiding ques-

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<sup>1</sup> It may strike some readers as curious that the question of “What is play?” should come near the end. Do we not need to know what play is before we begin our inquiry? The short answer is we already know what play is. Our intuitive concept of play is sufficient to make all of the judgments necessary for the arguments of chapters 2-4. However, once our account of play is complete, it will serve us to revisit previous conclusions and analyze them in a new light.

tions, doing the philosophy and skipping the science can only be seen as academic neglect. That being said the relevant literatures are too vast to fit into one dissertation, so in this respect we will have to settle for some degree of incompleteness. The aim here is to provide a foundation for the naturalistic philosophy of play, a framework for and preliminary answers to the central questions such an inquiry must address.

## CHAPTER 2

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# Why we play

### *The Roots of Play*

The guiding question of this chapter is why we play, which can be analyzed into two separate issues. On the one hand we can ask why we *evolved* to play. On the other, we can ask why we are *motivated* to play. Though distinct, these questions are not unrelated, and the answers to both will inform our investigation of why we ought to play and how we ought to play, which will be taken up in the following chapter.

Studying the underpinnings of human play requires a varied approach which begins with an investigation of both the evolution and psychology of animal play. Of central importance during this inquiry is the question of whether there is a distinct, play-specific instinct or behavioral-motivational system or whether play arises from a variety of mechanisms that are not specific to play. As I will argue, general features of animal motivation obviate the need to posit a play-specific behavioral-motivational system. This conclusion will be shown to hold for humans as well, after we modify and



supplement the model constructed in the first half of the chapter with human-specific research.

### *The Evolution of Play*

Play is biologically mysterious. It is often strenuous and energetically costly, yet it doesn't serve any obvious purpose. In fact, the apparent purposelessness of play is often used as one of its defining features (e.g. Bekoff and Beyers 1981). However, there's good reason to think that play does have a purpose (or purposes), and while there is not yet a consensus on what that purpose is, progress has been made by carefully attending to its potential costs and benefits.

#### COSTS AND BENEFITS

The costs of play are rather straightforward. First and foremost, there is an energetic cost. Play is vigorous, and with any vigorous activity comes increased nutritional requirements. Just as play can be exhausting, it can also be dangerous. While playing individuals are less vigilant with respect to predators, and play often puts animals in compromised positions, opening them up to injury. Lastly, play takes up time that could be spent doing other things. If one is playing then one is not hunting, foraging, or copulating.

Before addressing the potential benefits of play, we can take a moment to entertain the notion that play has no benefits. While this is a coherent hypothesis, it's unlikely for three reasons. First, play comes with the significant costs that we just elaborated. These costs would create selective pressure to inhibit or otherwise eliminate play behavior were it of no benefit to the organism. The second reason is that it's so pervasive. Play is not an isolated phenomenon; it is the norm for animals of a certain complexity. Lastly, there are a diversity of functions that have been ascribed to play none of which are mutually exclusive. To maintain that play is functionless, one must reject not one but *all* of the proposed functions.

The earliest scientific theories of play held that it was a means of shedding surplus energy (e.g. Spencer 1896). It's a product "higher animals" can afford because they provide their young with more than enough sustenance, and whatever is left over can get channeled into play. There's some appeal to the theory. Dog owners and parents of young children can attest to the efficiency with which play can sap energy from their energetic dependents. However, this hypothesis leaves unexplained the question of why juveniles are readily given and readily receive surplus nutrients or why, as Groos (1903) noted, tired animals that do not have an excess of energy can still be observed to play.

Groos' own theory was that play is a form of practice. Young animals rehearse and perfect behavioral repertoires that will be useful later in life. This view has many

proponents, with Byers (1998) being a recent and notable example. Byers claims that play facilitates important neurophysiological changes during a “sensitive period” in a juvenile’s development. It’s during this time that motor coordination related to species-typical movements is perfected.

Thompson (1998) has argued that play is a means of self-assessment for animals. It provides them with immediate feedback on what they can and cannot do. Blending this idea with play-as-practice theories, Spinka, Newberry, and Bekoff (2001) have claimed that play trains animals for the unexpected. Following Thompson, they claim that animals put themselves in positions which test the limits of their abilities, which in turn helps give them practice for when they find themselves in serious situations of uncertainty. The practice is as much cognitive as it is physical. Animals learn to manage their emotions and not overreact to precarious circumstances.

Special attention has been paid to the benefits of pretend play, which is a predominantly human phenomenon. Carruthers (2002) and Gopnik (2009) have argued pretend play in children exercises and refines the capacity for counterfactual reasoning. Carruthers claims that the selected-effect function of pretend play is to practice and refine these capacities which ultimately underlie adult ingenuity, creativity, and problem-solving. Gopnik claims that pretend play helps children flesh out “causal maps” of the world by having them think about ways the world could have been.

There are an abundance of explanations for why play evolved and only limited means for adjudicating them. Plausible cases can be made for each and in all likelihood many of the purported benefits of play may have factored into its evolution. I see no reason for trying to award any single explanation with a blue ribbon, especially in light of the fact that such a distinction carries with it little philosophical import.

#### FOUR WAYS TO EVOLVE

Of more importance to us is the relationship between play's adaptive value and the structures that underlie play. By adapting the model of Buss, Haselton, Shackelford, Bleske, and Wakefield (1998), we can entertain four hypotheses about the evolutionary status of play. First, play could be an *adaptation*, which in Buss et al.'s sense would entail that the structure or structures that produce play evolved and are sustained because they produce play. If this were the case, the relationship between play and what produces it would not be unlike the relationship between hearing and ears or sight and eyes. Eyes emerged because they provided organisms with sight, and they are evolutionarily sustained for the same reason.

Contrast this with avian feathers. It's thought that feathers initially evolved for thermoregulation, even though they now function to facilitate flight. This makes them a *co-opted adaptation* in Buss et al.'s nomenclature, an adaptation which was co-opted by natural selection to serve a different purpose.

While feathers may be a co-opted adaptation, the color of feathers is not. When feathers emerged they emerged with a certain color; being colored is not an adaptation itself; it is a by-product or spandrel<sup>1</sup> of having feathers. Since certain feather pigmentations are better at camouflaging or attracting mates, the color of feathers became what Buss et al. call a '*co-opted spandrel*', a by-product of adaptations that was co-opted by natural selection.

Lastly, play could be a *functionless by-product*, a by-product that has not been shaped by natural selection. An example of this might be the taste of feathers. Feathers never evolved to taste a certain way but do taste a certain way as a result of other adaptations. There is no function to the taste of feathers; it is just along for the evolutionary ride.

If, as many have argued, play does have a function, then we can rule out the possibility that it is a functionless by-product. The remaining options are harder to choose between. To help us in these matters, let us turn to Burghardt's (2005) theory of the evolutionary origins of play, which if correct offers evidence that play is in fact a co-opted spandrel rather than an adaptation or a co-opted adaptation.

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<sup>1</sup> The term 'spandrel' is taken from architecture and is literally the space between two arches. It is used synonymously with "by-product".

## SURPLUS RESOURCES HYPOTHESIS

Burghardt (2005) proposes that play only arose after four criteria were met. First, organisms had to possess the capacity for strenuous activity which in part depends on the capacity to store surplus energy. Mammals achieve this using fat deposits, which conserve metabolic resources for later use. This is in contrast to what insects do. A well-fed cockroach will simply grow bigger, not become chubby. The storage of energy allows animals to expend energy on useful but inessential activities like play without greatly increasing their susceptibility to short-term resource shortages.

Burghardt's first requirement is related to his second, the requirement that animals be shielded from bouts of famine or intense stress. This is particularly important for juveniles of mammalian species who are typically unable to fully hunt, forage or protect themselves. For this reason, parental care is crucial to meeting this second criterion, and not surprisingly, play is more frequent in animals that have extended periods of parental care.

The third condition is that animals have a need for sensory and cognitive stimulation. For many animals, mammals in particular, such stimulation is necessary for proper development and physiological functioning. When stimulation is suboptimal, boredom and restlessness may result. Play is used to fill in the gap, to provide stimulation in the absence of natural stimuli<sup>2</sup>.

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<sup>2</sup> This claim will be discussed in greater depth when we look at how play is motivated.

Lastly, play requires that the animals have a complex behavioral repertoire. This is usually the result of living in an ecologically diverse or changing environment but can also be necessitated by complex social interactions.

There are some difficulties in interpreting Burghardt, in particular, how he conceives of the relationship between the criteria and play. What should we make of his claim that the four criteria “underlie” play or his claim that some of them “may be necessary, although not sufficient, for play to occur” (Burghardt 2005, 172)? There is no incoherence in thinking that a species exhibits play behavior while failing to meet any of the four criteria, but in fact we don't such species. We might then interpret Burghardt as saying that the four criteria are necessary in the sense that without them play is strongly maladaptive. This makes sense with regard to the first two criteria; play comes with a cost and shouldn't be maintained among species that can't afford it. Why should this be the case with the second two conditions? What's so bad about playing for animals that don't get bored or that have a simple behavioral repertoires? The natural answer is that it isn't useful to them, but this doesn't sit well with his other claim that “incipient play-like behavior did not involve any particular functions” (172). The only other option is that Burghardt sees (a) the need for stimulation and (b) the capacity for complex behavioral routines as setting the psychological stage for play. In the terms defined earlier, it seems that Burghardt views play as a *co-opted spandrel*. It is a spandrel *of* cognitive complexity and energetic surplus. Strictly speaking, the spandrel

before co-option was the “incipient play-like behavior”, not play. Thus, on this interpretation, we can make sense of the claims that the criteria “underlie” play and that they are not “sufficient” for play, though they are in fact sufficient for incipient play-like behavior.

### *Motivation and Animal Play*

We've discussed the beneficial effects that certain *behaviors* might have on the individual; however, evolution does not and indeed cannot work on behaviors, only the dispositions that underlie those behaviors. It is with the dispositions that we get the other half of the why story. They give us the proximate causes of play.

If we want to know why an organism is disposed to play, we must ask why the organism is motivated to play, and to answer this question we need a framework in which we can explain why an animal is motivated to do anything. This turns out to be a difficult task. As Burghardt (2005, 133) notes, talk of motivation has fallen out of fashion among biologists who prefer to talk in terms of readily observable quantities like hormone levels or environmental conditions. The research that does exist on motivation primarily concerns the general structure of motivation without specifying the content. For instance, much attention has been paid on the distinction between wanting and liking, while the question of what it is that animals want and like has taken a back seat. Metaphorically speaking, researchers have been more interested in the study of



cartography than in the practice of making maps, and this is not without reason, but unfortunately for us our task is primarily one of location. We need to locate play within the context of an animal's motivational economy.

#### FOUR THESES ABOUT PLAY

Cats chase mice as a means of predation. Cats also chase invisible mice as a form of play. When a cat is chasing an invisible mouse, does it do so because it is motivated to *play* or because it is motivated to *chase*? Is it satisfying a *need to play* or is it satisfying a *need to chase*? Or is it not satisfying a need at all? More generally we can ask to what extent is play cognitively independent from other behavioral-motivational systems? As we will see in chapter 3, our answers to these questions have normative implications attached to them.

To start, let us carve up the conceptual space by identifying four separate theses about the psychology of play.

(1a) A unique behavioral-motivational system produces play behavior. (Independent Motivation)

(1b) Play satisfies a psychological or physiological need unique to play. (Independent Need)

(2a) Behavioral-motivational systems not specific to play, ones with alternate functions (e.g. predation, foraging) or ones that are used for general cognition, produce play behavior. (Motivational Dependence)

(2b) Play satisfies psychological or physiological needs not unique to play. (Need Dependence)

These theses make use of two key, unspecified terms: 'behavioral-motivational system' and 'need'. One way of construing a behavioral-motivational system is as an instinct or set of instincts. By instinct, I mean a mechanism which can initiate behaviors or sequences of behaviors given certain stimuli, and that may be shaped by learning but is in large part innately constrained. For example, we might think that a cat has a predatory instinct, which is constituted by one or more behavioral-motivational systems. Each system governs a range of behaviors and produces these behaviors when the right conditions are present. A need, on the other hand, is something that is required for proper development or functioning. As we will see, needs are intimately tied to the notion of well-being. An individual whose needs are not met cannot achieve a "normal" level of well-being. We will continue to cultivate these terms as we construct a theoretical framework.

## CHOOSING BETWEEN THE THESES

The first two theses maintain the cognitive *independence* of play, the second two the cognitive *dependence* of play. In this way, the first two and the second two are naturally opposed to one another. If (1a) and (1b) are sufficient to explain the phenomena, there's no need to posit (2a) or (2b) and *vice versa*. This is not to say that one cannot hold all four of the theses or any combination thereof. All four theses are mutually consistent. It could still be that play is partly independent and partly dependent, or that some forms of play are independent while others are dependent. It's also not necessary to hold both (1a) and (1b) or both (2a) and (2b). For example, there could be a unique motivation to play without that motivation constituting a psychological need. Still, we can say that (1a) and (1b) are natural complements of each other because our notion of needs and motivations may be interrelated. The presence of a need is often, but not always, thought to motivate behavior that will satisfy that need. In this way, if one holds (1b) it's easier to hold (1a), and if one holds (2b) it's easier to hold (2a).

There is no bigger test than whether the cognitive dependence or independence theses can adequately explain the phenomena, but there is good reason to think, all things being equal, that the dependence theses are theoretically preferable to the independence theses. (2a) and (2b) are more parsimonious solutions to the problem of how play emerged and fit nicely with Burghardt's (2005) evolutionary picture. Playing animals evolved from non-playing animals and when they did they inherited a fully

functional motivational system. If only slight modifications to the extant motivational system were all that was needed to produce the observed play behavior, then we have a tidy, continuous story of how play evolved. It would take a smaller evolutionary “leap” to co-opt spandrels already in place than to produce novel play adaptations, which presumably evolved *ex nihilo* or through some comparatively convoluted story. This convoluted story becomes less and less plausible when we consider the fact that evolution is often conservative with regard to structures and that, as phenotypes go, play dispositions evolve rather easily. Play appears to have evolved many times and in many different ways and is present in nearly all mammals, many marsupials, many birds, and perhaps some fish and reptiles (Burghardt 2005). It's *possible* that an independent structure evolved each time play emerged or even less plausibly each time a different type of play emerged, but this type of *ad hoc* account must be resisted if at all possible.

## ANIMAL PLAY PHENOMENA

What are the phenomena we are trying to explain? Below is a list of prominent findings concerning animal play. They are by no means exhaustive of the voluminous literature, but I see them as representing the core *desiderata* of a motivational theory of play.

1. Play decreases when resources are scarce or when animals are under stress<sup>3</sup>.

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<sup>3</sup> See for example Burghardt (2005) or Konner (2010).

2. Play often resembles “serious” behaviors. (e.g. play chasing resembles predatory chasing)
3. Smart animals tend to play more<sup>4</sup>.
4. Juveniles play more than adults.
5. Animals in captivity tend to play more than wild animals<sup>5</sup>.
6. Play behavior can persist into adulthood.
7. There are often species-specific sex differences in play habits<sup>6</sup>.
8. Some serious behaviors do not have a corresponding play (e.g. drinking, sleeping).
9. The three primary forms of play in animals are locomotor play, object play, and social play.
10. In rough-and-tumble play, dominant animals often self-handicap; they “play down” to the inferior animal so as to make an even playing field<sup>7</sup>.
11. Play signals may be used to initiate play sessions (e.g. the “play bow” in canids)<sup>8</sup>.

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4 See for example Konner (2010) who reviews evidence that between mammalian orders play is correlated with brain size.

5 See for example Burghardt (2005).

6 See for example Panksepp, Siviy, and Normansell (1985) for a discussion of sex differences in the play behavior of rats.

7 See for example Bekoff and Allen (1998) for a discussion of role-reversal and self-handicapping in canids.

8 See for example Bekoff and Allen (1998).

12. Some animal play is both complex and stereotyped. It can have specific, complex goals (e.g. pinning an opponent) and norms governing behavior (e.g. not biting too hard) that are invariant across groups of individuals<sup>9</sup>.

In trying to explain these phenomena we can use the motivational dependence thesis as a working hypothesis. After building up a general theory of animal motivation, a theory of how an animal is motivated to do all of its non-play tasks, we can see what needs to be added or modified in order to get the play behavior that is observed.

### *Theories of Animal Motivation*

In this section, we'll begin with a discussion of the influential, albeit dated motivational theories of Lorenz and Tinbergen. These will give us a foundation for understanding Leyhausen's *drive surplus theory*, which is not only a general motivational theory but a theory of play motivation in particular. To conclude the section, we'll attempt to update Leyhausen's theory of play in light of the more current *behavior systems model*.

#### LORENZ'S HYDRAULIC DRIVE THEORY

A *drive* is a type of motivation or “energy for action”. It's more stable than a passing desire and is sometimes identified as an instinct. The notion of a drive received a prominent formulation by famed ethologist Konrad Lorenz (Lorenz and Leyhausen 1973),

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<sup>9</sup> See for example Bekoff and Allen (1998) and Bekoff (2001).

who proposed what is commonly referred to as the 'hydraulic drive theory' after the metaphor used to convey the model. The first tenant of theory states that drives motivate behavior by way of “activity-specific energy”. That is, they stimulate certain behaviors rather than behavior generally. For instance, a prey drive produces activity-specific energy used to motivate behavior relating to the capture of prey and not to copulation or the building of nests. A second feature of drives is that their activity-specific energy is released by certain types of stimuli and not others. A prey drive may motivate chasing behavior in the presence of small woodland creatures but not in the presence of coiled rattlesnakes. A third feature is that drives naturally accumulate energy over time. The longer a cat has gone without hunting prey, the stronger its drive to hunt prey. The accumulation of drive ultimately stems from physiological features of the organism. As a resource (e.g. water, glucose) is depleted, action-specific energy increases in the relevant drives. Lastly, as the energy of a drive increases, the range of stimuli that release the drive broadens. For example, a cat that hasn't eaten in a while may chase a wider range of prey than a cat that is sated.

These four features are essential to Lorenz's hydraulic drive model, which Lorenz illustrated using hydraulic concepts. (see Figure 1). A drive consists of a “reservoir” that fills up with activity-specific energy. The reservoir has a valve on the bottom that is kept from releasing by a spring. The rate of flow is proportional to the compression of the spring, which has two forces operating on it. One is a weight that is attached

to the spring, which represents the strength of the stimulus. The stronger the stimulus, the heavier the weight and the more the spring is compressed. The other force on the spring is the pressure from the water. This represents the push of the accumulated activity-specific energy. Given the same stimulus, a reservoir that is mostly full will produce a greater rate of flow than a reservoir that is mostly empty. If the reservoir becomes too full, release may be triggered by an inappropriate stimuli or no stimulus at all. An example of this comes from Hinde (1966) who recounts an experiment in which canaries that were observed in captivity during nesting season. No nesting materials were present in their inclosures, which, as the season progressed, caused them a considerable amount of stress. As their search for twigs and grasses continued in vain, their anxieties rose to a fever pitch with some of the birds attempting to construct nests out of their still-attached plumage and others plucking feathers clean off their tails. This is a paradigmatic example of activity in a vacuum. Drive has accumulated to the extent that the activity-specific energy flows over irresistibly and indiscriminately.



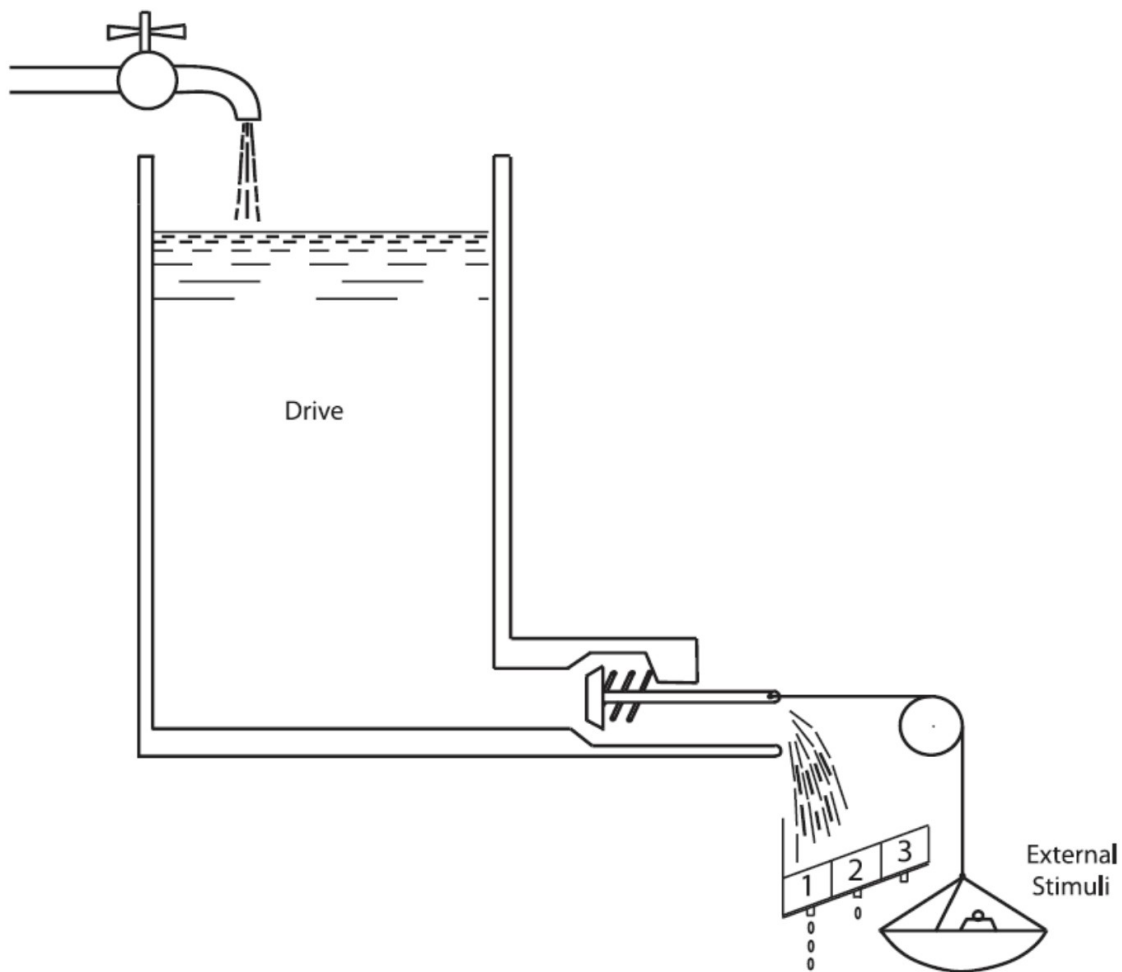


Figure 1: Lorenz's hydraulic drive model. The water, labeled 'drive', represents activity-specific energy which accumulates in the reservoir. It applies pressure to the spring-loaded valve at the bottom of the tank as does the external stimuli, here represented by the weight. A sufficient amount of force releases the water into the collecting pan, and when water flows through the different holes different behaviors are elicited. Image from Berrige (2004), modified from original source in Lorenz and Leyhausen (1973)

There's not just one behavior that is activated by the flow of action-specific energy. The model is supposed to explain the triggering of fixed-action patterns, stereotyped sequences of behaviors. Mating rituals, like those of the oft cited stickleback, are of this nature on account of their consisting of a series of behaviors that always proceed

in the same order. Lorenz's explanation of fixed action patterns is painfully simple. Returning to the hydraulic metaphor, we are asked to imagine there is a collecting pan that captures the flow of water from the reservoir. In the pan are a series of holes at different heights. The first behavior in a fixed-action pattern corresponds to the lowest hole with each successive behavior corresponding to higher and higher holes. As the water begins to flow, it exits the lowest hole and elicits the first behavior. If the rate of flow is great enough, the collection pan will continue to fill and trigger the full range of behaviors in the proper sequence.

#### TINBERGEN'S HIERARCHICAL MODEL

Lorenz's colleague, biologist Nicolaas Tinbergen (1951), offered a more sophisticated model of fixed-action behaviors. He claimed that each behavior in the sequence was triggered by its own releasing stimulus. An initial releasing stimulus elicits the first behavior, which leads the animal to the second releasing stimulus, which in turn elicits the second behavior. The second behavior leads to the third releasing stimulus, and so on, until there is a final consummatory stimulus that terminates the sequence. We might think of a cat hunting a mouse as a sequence that goes from stalking and chasing, to pouncing and killing, and ultimately eating. Certain visual cues release the stalking behavior, which put the cat in position to receive the cues to begin chasing. Chasing leads the cat to be close to the mouse, which provides the stimulus for the release of

pouncing behavior. This stimulus-response chain continues until the cat consumes the prey at which point the behavior pattern is complete. The concept of motivation fits into Tinbergen's scheme in the following way. The drive for food contains a store of motivation which "flows" to stalking behavior when the appropriate releasing stimulus is found. When the cue for chasing is present, the motivation flows from stalking behavior to chasing behavior, and on down the chain. Importantly, motivation always flows downstream toward the consummatory act.

### LEYHAUSEN'S DRIVE SURPLUS THEORY

Having presented Lorenz's and Tinbergen's models, we can begin to discuss Paul Leyhausen's drive surplus theory (Lorenz and Leyhausen 1973). Leyhausen adopts much of Lorenz's hydraulic model. He agrees that there is action-specific energy and that this energy naturally accumulates and needs to be discharged. However, he also makes a favorable departure from Lorenz who held that drives are grounded in physiological needs. While one might be able to tie a hunger-based behavior like foraging to a physiological depletion like that of blood glucose levels, other behaviors, like exploration and play, defy this sort of explanation and may in fact *increase* when physiological needs are met. Leyhausen wisely divorces drives from physiological needs, avoiding the problem entirely. In accord with Tinbergen, Leyhausen divides instincts into component behaviors, each with its own motivation, that are linked together in a series. In

contrast with Tinbergen, he doesn't see motivation as being activity-*general* or as flowing through a sequence of behaviors. Each behavior has a reservoir of action-*specific* energy that is retained to some degree even after the animal has moved on to a different behavior. Stalking-motivation doesn't simply convert to chasing-motivation when the cat begins to chase. What has happened is that the chasing-motivation has become predominant.

Leyhausen had good reason for departing from Tinbergen's model. During his extensive study of feline species, Leyhausen observed that in kittens components of an action pattern often occurred independently or out of order, especially during play. It was only after the cat had its first kill that it began to organize behavioral components into the ordered sequences displayed in adulthood. Even so, adult cats do not invariably go "down" the chain of behaviors to the consummatory act. This is illustrated nicely by Leyhausen's ingenious experiment in which he answered the question of what a cat would do in a room full of mice.

"[Leyhausen] put a hungry cat in a room that was completely devoid of any cover but filled with an abundance of live mice...In every one of these experiments, the cat first caught, killed, and ate half a dozen of the mice, then killed a few more without eating them, then proceeded "playfully" to catch some more without executing the killing bite. After reaching this stage, the experimental cat would sit quietly in the attitude of lying in ambush, with its head lowered and intently watching some of the mice running about on the opposite side of the room while others were actually crawling, unnoticed, over its paws." (in Lorenz 1981, 134; discussed in Timberlake and Silva 1995)

Here we have a case in which the behaviors go in the direct opposite direction to the normal biological progression. It suggests that eating, killing, capturing, and stalking are independently motivated, because if the opposite were true, if each behavior was motivated out of a drive to eat, all of the predatory behaviors would have stopped after the cat was sated. What the experiment shows is that after the drive for eating is sufficiently depleted, the drive for performing a kill bite takes over. After this is depleted, the previous drive, that for grasping prey, predominates.

The rates at which drives accumulate and discharge, according to Leyhausen, are biologically predetermined. Natural selection fixes these behavioral propensities to best serve the organism. This explains why the drive to stalk took so much longer to deplete in the room-full-of-mice experiment. In natural conditions, cats must spend much more time stalking than pouncing or killing. Going further, he claims that play is the result of surplus drive being discharged, so play is linked to these genetic predispositions as well.

In juveniles, predatory drives are not yet functionally organized and cannot fulfill their ultimate biological purpose of capturing prey. This results in the activation of behavioral components without these behaviors converging on a biological goal, and we interpret this hodgepodge of activations as play. The same can occur for biologically mature adults. If during the normal course of existence, they do not discharge enough of a given drive, this drive may spontaneously discharge or cease to discharge when the

“shut-off” stimulus is present. Cats, for instance, frequently play with their prey before eating it. This is a case in which the grasping drive fails to shut off even though the prey is ready to be killed and eaten.

The last component of Leyhausen's theory is the least developed but necessary to explain the phenomena. He claims that animals under certain conditions, for instance when well-fed, juvenile, or in captivity, have an “unspecific functional readiness” (229). This presumably makes behavioral components more reactive, that is, able to be triggered with greater vivacity or by weaker stimuli than normal. He sees this as a general phenomenon that is not specific to any one behavioral component; behaviors in general are more readily deployed and that it explains the exaggerated movements of animals in play. The motor patterns are overstimulated, and thus, activate beyond their normal level. The concept of unspecific functional readiness is an important key to the puzzle and is something I'll draw on when defining the notion of *playfulness*.

Leyhausen's theory does a fairly good job of explaining the play phenomena highlighted earlier. It does particularly well with regard to the increased levels of play exhibited by juveniles and animals in captivity. Since these animals are unable to enact their predatory drives in earnest, their drives accumulate, prompting the need for release through play. Play resembles “serious” behaviors because they are the stimulation of “serious” drives, and they appear out of order because the components of such behaviors are independently, rather than serially, motivated. Still, the drive surplus the-

ory has some trouble spots. It does not explain why some behaviors do not have a corresponding form of play; it cannot explain the presence of play signaling, and while it can explain why play can be stereotyped, it has difficulty explaining how play can consist of complex chains of behavior that integrate behavioral elements from a variety of systems.

Leyhausen's theory also has theoretical problems like, for example, his claim that the release of a drive always reduces motivation. While this is true in some cases, in others it is simply false. Some behaviors are susceptible to "priming effects" in which the act of performing an action actually increases the motivation to perform it again. Consider what Berrige (2004) calls the "cocktail peanut" effect. Say you are at a party and the host asks if you would like a cocktail peanut. You take one out of politeness (you're not particularly hungry) but once you eat it you find yourself wanting more and more. Thus, performing the motivated act does not diminish or deplete motivation but rather increases it. These effects are best explained using reward paradigms rather than drive paradigms. The pleasure and psychological reward after eating the first peanut exceeds expectations, which explains why subsequent motivation is increased. This issue highlights a broader problem for Leyhausen, that his model does not take into account reward-based learning; however, this problem may be alleviated if adapt Leyhausen's theory to the behavior systems model.

## BEHAVIOR SYSTEMS MODEL

The behavior systems model (Timberlake and Silva 1995) is strongly hierarchical in the way that Tinbergen's model is. At the top is the *system* level, which concerns broad biological needs like reproduction and feeding. The *subsystem* level, still broad, contains means of satisfying the needs at the system level. For instance, the feeding system might govern subsystems for foraging and predation. These subsystems are subject to stimulus conditions that elicit responses, and such as the behaviors at the next lower level, the level of *modes*. Modes, such as general search, focal search, and consuming/handling, are considered "motivational substates" that organize behaviors into sequences. They are responsive to features like the propinquity of prey, which might indicate the prudence of shifting from a general search to a focal search. These shifts are not rigid or unidirectional as they are on Tinbergen's scheme. An animal need not go from general search to focal search to food handling. When a focal search is unfruitful, the stimuli may initiate a return to general search. Modes govern *perceptual motor modules* which are types of behaviors that have narrow stimuli-response conditions. Examples of such modules include traveling, investigating, and chasing, which activate specific behaviors called *action patterns*. Traveling, for instance, might activate locomotion and visual scanning.

Leyhausen's drive surplus theory primarily exists at the level of the mode in the behavioral system model. Stalking, chasing, pouncing, etc. would all be considered



behavioral modes that fall under the subsystem of predation. In accord with Leyhausen, modes are claimed by Timberlake and Silva to have a degree of independence in motivational strength. Motivation does not simply flow from one mode to the next as it does in Tinbergen's scheme. However, there is no overt indication that Lorenz's hydraulic concepts of accumulation and release govern the motivation of modes. It's plausible that the modes' independent motivational states generally increase through inactivity and decrease through activity, but this assumption is not made explicit. Play deprivation studies provide evidence that play motivations are governed by accumulation and release like principles. Rats deprived of play show a short-term "rebound effect", whereby levels of play exceed normal levels immediately following the deprivation period (Martin and Caro, 1985; Varlinskaya, Spear, and Spear 1999; Holloway and Suter 2004), suggesting that the motivations underlying play accumulate in the absence of release.

In contrast to Leyhausen's drive surplus theory, the behavior systems model *does* permit higher levels to modulate the motivation of lower levels. For instance, hunger may stimulate the feeding system, which may stimulate the hunting subsystem, which in turn stimulates the mode of general search. Another important difference is that the behavior systems approach incorporates learning models into the organization of behavior. Chains of modes and modules are formed on the basis of previous reward. In this way, the behavior systems model is something of a hybrid between nativism and

adaptionism. Specific modes and modules may be hardwired, but their interconnections are subject to environmental influence. This may explain how behavioral components get strung together into novel play sequences.

### *Play and Intrinsic Motivation*

Play is rewarding and can be used as a reward. Socially-isolated rats have even been shown to prefer access to a playmate over access to food even when hungry (Ikemoto and Panksepp 1992). But why is it rewarding? One option is that there are rewards in play that are separable from the activity itself. For instance, one of the apparent rewards in the play fighting of rats is to bite the opponent on the nape. Pellis and Pellis (2009) argue that these play bites are rewarding because they mimic the bites employed during sex. Rewards like these may help link component play behaviors into functional sequences, just as food rewards help link non-play behaviors into functional sequences. However, it's unlikely that *all* of rat play fighting can be explained by the pleasure of nape biting, and it's even less likely that all of play can be explained by rewards external to the activity itself. Animals, and humans for that matter, enjoy the process of playing and would do it even if there were no positive outcomes (and many times there are not). After all we readily play without the promise of a meal or an orgasm. For this reason, we may say that play, or at the very least animal play, is almost always intrinsically motivating.

That play is intrinsically motivating, not motivated for the sake of some separable outcome, fits with the model we have developed so far. As we saw, cats will happily stalk mice that they have no intention of catching. Behavioral modes are motivated independently of whether they lead to the next behavior in a sequence. However, this is just one way in which play is intrinsically motivating. As I will argue, other, general features of intrinsic motivation contribute to and help explain the animal play phenomena without the invocation of an independent play motivation along the lines of (1a).

## OPTIMAL LEVEL THEORIES

One of the more time-tested theories about intrinsic motivation is that higher animals are motivated to maintain an optimal level of stimulation<sup>10</sup>. Too little and the individual will be bored; too much and it will be anxious or over-stimulated. The most frequent condition is that individuals have suboptimal as opposed to supraoptimal levels of stimulation. For this reason, it is usually the case that stimulation is actively being sought out rather than avoided. Dember, Earl and Paradise (1957, and discussed in Barto 2014) provided an early study showing this effect. Rats were placed in a figure-eight pathway in which one of the loops had vertical stripes and the other horizontal stripes. Though otherwise identical, the loop with vertical stripes provided the rats

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<sup>10</sup> If you recall, this feature of animals is a necessary condition for play's emergence according to Burghardt (2005).

with greater visual stimulation since the view changes as a function of the rats movement whereas the horizontal lines provide more of a continuous visual experience. Rats' initial preferences varied; however, rats that initially preferred the horizontal stripes often changed their preference to the vertical stripes. On the other hand, rats that initially preferred the vertical stripes by and large kept their preferences for the more stimulating path.

There are a number of ways that psychologists have cashed out the umbrella term "stimulation". Hebb (1955) appeals to the level of physiological arousal. This refers to the general state of activation of the central nervous system. Again, the claim is that we seek out some moderate level between the extremes. Paint drying does too little to physiologically arouse and being held at gunpoint does too much. Optimal cognitive and motor functioning occurs somewhere in between. Dember and Earl's (1957) optimal level theory appeals to a decidedly more psychological notion, that of *complexity*, which is a function of the discrepancy between the expected stimulus properties and the experienced stimulus properties<sup>11</sup>. As organisms become better at predicting and understanding phenomena, the relative complexity is reduced and the phenomena become boring. This is why the rats shift from the path with horizontal lines to the path with vertical lines.

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<sup>11</sup> For an alternative scheme, see McClelland, Atkinson, Clark and Lowell (1953) who explain stimulation between an incongruity between adaptation level, as opposed to expectation, and the experienced stimulus properties.

Berlyne (1971) provides one of the most comprehensive of the optimal level theories, much of which remains current in the field. Like Hebb (1955), he claims that we seek to achieve an optimal level of arousal which is typically accomplished by maximizing what Berlyne calls the “arousal potential” of stimuli. Arousal potential is a function of “collative variables”, namely complexity, novelty, surprisingness, ambiguity, and puzzlingness. All of these serve to make stimuli “interesting”, and we are intrinsically motivated to seek out interesting stimuli.

It's easy to see how these variables are present in play activities and how they make play activities preferred over other activities that might equally satisfy Leyhausenian motivations. For instance, animals *could* spend their time chasing windblown leaves, and doing so may very well satisfy certain motivations to locomote and chase. However, chasing a conspecific is preferred because, compared to the relatively predictable path of a leaf in a steady breeze, the path of a fleeing animal is vastly more complex and more challenging to predict. It's an activity that will entertain throughout the animal's life by continually providing novelty and surprise. Of course, if the winds are particularly choppy and the gusts make the leaf move erratically, chasing it may be too alluring to pass up.

## COMPETENCE AND CHALLENGE

Just as play chasing can provide stimulation, it can also provide a sense of competence, which has been long held to be an intrinsic motivator (White 1959; Kagan 1972; Deci 1975; Deci and Ryan 2000, 2012). In White's (1959) landmark paper, competence is considered the ability to control and affect one's environment. It is associated with the cultivation of a range of skills that enable one to successfully interact with her surrounds. Deci (1975) elaborates on this idea by appealing to the notion of optimal challenge. Goals that are too easy or too hard to achieve are less likely to be motivating compared to ones that are difficult but surmountable. It may be counterintuitive that animals should enjoy a needless challenge, but that's precisely what Harlow (1950) observed in his classic study of macaques. Monkeys will happily solve mechanical puzzles even if there is no reward for doing so. Not only will they solve the puzzles, they will do so repeatedly and learn to get better at them in the same way that monkeys given a completion rewards will. This suggests that challenge is its own reward.

## OTHER INTRINSIC MOTIVATORS

There are undoubtedly more classes of intrinsic motivators for animals. One excellent candidate is the motivation for *relatedness*. While this has been proposed in the context of human motivation and will be presented in this context later in the chapter, it is likely to apply to social animals. The absence of discussion on relatedness in the animal

literature is likely indicative of the lack of integration with the field of human psychology<sup>12</sup> rather than evidence of an evolutionary discontinuity. In this respect, an animal motivation for *autonomy*, the self-determination of behavior, may be similar<sup>13</sup>. Since these will be discussed at length in the following section, I won't spend any more time on them here.

## PLAYFULNESS

To complete our model, we need the familiar but scientifically neglected notion of *playfulness*. One approach to identifying playfulness would be to adopt Leyhausen's proposal that there is an unspecified functional readiness in young animals, animals that are fell-fed, or are in captivity. Another approach would hold that playfulness is a top-down flow of motivation from the subsystem level to the level of modes, or in other words, a general increase in drive. However, neither of these approaches explain why consummatory behaviors, the terminal links of behavior patterns, don't have associated forms of play. Animals do not pretend to eat or drink for the fun of it, nor do they pretend to sleep. It's telling that these behaviors are ones in which there is no need for independent, intrinsic motivation. One chews and ingests food because it tastes good, not because one is intrinsically motivated to chew and swallow.

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<sup>12</sup> This lack of integration is noted by Heckhausen (2000).

<sup>13</sup> Heckhausen's (2000) theory of animal motivation is a notable exception.

Perhaps then we should think of playfulness as global enhancement of intrinsic motivation. After all, it is the intrinsically motivated behaviors that predominate in play. Enhancement could take the form of supplying additional intrinsic motivation or improving the hedonic quality of performing intrinsically motivated behaviors. Animals may feel a greater push or receive greater enjoyment from activating behavioral modes, which could in turn broaden the range of eliciting stimuli. The desires for stimulation and optimal challenge would be enhanced as well as any other source of intrinsic motivation. In this way, playfulness is a non-specific, untargeted phenomenon. It does not constitute an independent play motivation, as the independent motivation thesis holds, but rather amplifies the motivational mechanisms that give rise to play but are not unique to play

Importantly, play can occur without playfulness, and playfulness can occur without play. Playfulness can be paired with any number of non-play activities, though these activities should primarily be of the intrinsically motivated sort. Exploration is a good example. A young dog might explore its environment with the exuberance and the lack of discretion that is emblematic of playfulness. Play can also take on a serious tone that is inconsistent with playfulness. Intense, play fighting is often of this nature. Nevertheless, serious play is still play even though its not being done playfully.

Though the enhancement of intrinsic motivation is the central feature of playfulness, there are others many of which have been misattributed by scientists and



philosophers to play itself. For instance, it is often said that playing animals have a care-free attitude, even though animals in a heated wrestling match are anything but care-free. A playful individual however cannot be anxious. It can't be worried about acquiring food and water for survival or protecting oneself from imminent threats. When a threat does present itself, individuals may immediately snap out of their playful state and shift to a normal or alert state.

Play is also described as being “fun” (e.g. Spinka et al. 2001) even though not all play is fun, strictly speaking. A dog that gets pinned to the ground and puts its tail between its legs is not having fun and is certainly not playful, but it may still be playing. We can also associate playfulness with being uninhibited and creative. While these adjectives have been used to describe playing humans, they no doubt have analogues in animals. When one is playful one is receptive to a broader range of possibilities; one is not worried about how one is being perceived.

Playfulness is more likely to appear and appear with greater force when certain environmental and biological conditions obtain. Animals need to be relatively rested, hydrated, and well-fed. They need to be free from the threat of danger, which is frequently the case when animals are in captivity or are protected by the vigilance of adults. The last feature of playfulness is that it's strongest and most common in juveniles. As one ages, one becomes less playful and more serious.

## REVISITING THE PHENOMENA

At this point, it will serve us to provide an overall picture of the model. Components of serious behaviors are in part independently motivated, and this motivation is generally subject to accumulation and discharge. By and large, the longer an animal has gone without exercising a mode, the more the animal will be motivated to exercise it. Additionally, animals will seek out optimal levels of stimulation and challenge. All of these sources of intrinsic motivation are enhanced by what I call 'playfulness'.

With a sketch of the model in hand, let us examine how it fairs at explaining the phenomena we enumerated earlier in the chapter.

1. Play decreases when resources are scarce or when animals are under stress. This can be explained by the decrease in playfulness during these times, and the greater attention given to the extrinsic goals of securing safety, food, and water.
2. Play often resembles “serious” behaviors because play is often the activation of “serious” behavioral modes. Such modes accumulate motivational strength disposing animals to play as a means of release.
3. Smart animals tend to play more, which can be explained by appealing to their possession of greater number of appetitive behaviors, their increased need for cognitive stimulation, and their increased desire and capacity for surmounting cognitive challenges.

4. Juveniles play more than adults because they are naturally more playful and are less likely to exercise their behavioral modes in a serious setting like hunting.
5. Animals in captivity tend to play more than wild animals for similar reasons that juveniles play more than adults. They are less likely to be able to perform serious activities and may be more playful because they are well-fed, under little stress, and are free from predatory threats.
6. Play behavior can persist into adulthood because adults can still be playful, they still have independently motivated behavioral modes, and they are motivated to seek out an optimal level of stimulation and challenge.
7. There are often species-specific sex differences in play habits. This can be attributed to motivational differences between the sexes (e.g. differences in level of aggression).
8. Some serious behaviors do not have a corresponding play (e.g. drinking, sleeping). These are behaviors that are extrinsically motivated, which are not positively affected and perhaps negatively affected by playfulness.
9. The three primary forms of play in animals are locomotor play, object play, and social play. These correspond to different types of behavioral responses and behavioral systems. Broadly speaking locomotor play corresponds to locomotive modes; object play to grasping and food preparation; social play to sex and sociality. An

observational study of small-clawed otters corroborates this claim. Pellis (1991) found that object play was more common prior to meals and social play was more common after meals, which, as Pellis argues, is evidence that forms of play depend on the motivational strength of non-play systems. The reasoning behind this claim is as follows: as meal-time approaches the otters' food preparation behaviors begin to ready, and this readiness translates to object play which motivationally depends on these food preparation systems not on some independent play motivation.

10. Dominant animals often self-handicap during play; they “play down” to the inferior animal so as to make an even playing field. They do this to achieve an optimal level of stimulation and challenge. Dominating an inferior animal provides little stimulation or challenge, and thus is less motivating than self-handicapping.

#### WHAT'S LEFT TO EXPLAIN?

Despite the explanatory power of the revised surplus drive theory and the principles of intrinsic motivation, our account still seems inadequate to explain *all* of the phenomena. One problem spot is the presence play signals, which seem to be innate rather than learned and seem only to govern play. It could be argued that such “play” signals are in fact “playfulness” signals; however, this response is less than satisfying. Another, deeper problem with the model is the presence of play that is both complex *and* stereotyped. It's reasonable to think that general, non-play-specific motivational mechanisms

could give rise to complex play and play that is similar across individuals, but as the complexity of the play increases, it becomes less and less plausible that different individuals would arrive at the very same type of play. In light of these considerations, there may be some truth to the motivational independence thesis (1a). There may be in some species a system specially evolved for governing behavior patterns to be used in play. It may have innate stimulus-response cues that initiate play from play signals, and play may also have an independent motivational structure, such that particular play behaviors have their own drive to be activated in a Leyhausenian manner. However, these concessions are not as damaging to the independence theses as one might think. Here a distinction made by Burghardt (2005) is helpful. He defines primary process play as play that arose as a natural consequence of psychological and physiological features of the individual and that has not been subject to natural selection. After primary process play has had a chance to establish itself, natural selection begins to shape it, and play begins to provide a modest contribution to reproductive fitness. Secondary play is play that has begun to be important, and tertiary play is play that serves a large and potentially critical role in an individual's development<sup>14</sup>. At the very least, we have given a possible explanation of primary and secondary process play and perhaps some tertiary play as well. We've provided a solid body of evidence that play, with the exclusion of some complex and stereotyped forms, generally follows the dependent motivation thesis (2a).

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<sup>14</sup> Interestingly, Burghardt (2005) is skeptical as to tertiary process play's existence.

## COMPARISONS WITH OTHER MODELS

Few have attempted to give a full theory about how play is motivated, and there is no consensus as to whether it is of a dependent or independent nature. Following Meyer-Holzapfel (1956), Spinka et al. (2001) and Panksepp (1998) have claimed that play has an independent motivational structure. For Spinka et al., play has an underlying emotion which motivates the behavior.

“We hypothesize that play is emotionally *exciting* (perhaps even thrilling, though not intensely frightening) and rewarding, maybe even *pleasurable*, while at the same time being *relaxed*. We suggest that this combination of affective attributes is unique to play producing the complex emotional state that is referred to as “having fun” in human folk psychology.” (2001, 144)

Spinka et al.'s account of the unifying emotion is less than compelling. It's at best paradoxical and at worst incoherent. How can one be excited *and* relaxed at the same time? Moreover, it doesn't do justice to the phenomenology of play. Play is sometimes exciting but sometimes not. It's sometimes relaxed and sometimes serious. There is no one feeling to play. However, we should not discard the notion of fun, but rather see that it is identified with playfulness rather than play.

Panksepp (1998) has argued that play has a distinct and unique neural circuitry. As evidence, Panksepp draws on a wealth of research on the neuroanatomy, neurochemistry, and neural activation patterns of the rough-and-tumble play of rats. However, his work is limited in several different respects. First, isolating the operative brain

mechanisms underlying play does not show that these mechanisms are unique to play; they just show that play is the product of the brain. No naturalist is going to deny this. Second, his data is taken exclusively from a specific type of play in a specific species of animal. It is premature to draw any conclusions about play generally or about inter-species similarities from this narrow line of research. Panksepp would admit as much but still can't help but speculate about the origins of human play. "The common denominator for all [human forms of play], however, may arise from basic neuronal systems that were originally designed to generate [rough-and-tumble play]" (283). However, as we will see in the next section, there is no need to appeal to rough-and-tumble circuitry to explain human play. It's also important to note that there is no inconsistency between the model we developed and Panksepp's claim about a rough-and-tumble play system. Rat play is both stereotyped and complex, so we may accept that it follows the independent motivation thesis (1a) rather than the motivational dependence thesis (2a).

In contrast to these views, Pellis (1990) has argued in support of the motivational dependence of play on the basis of the observational study of small-clawed otters discussed before. Feeding influences the nature of play in a way that suggests that play depends on the motivational strength of non-play systems. Lorenz (1981) suggests that primitive forms of play are dependently motivated but that more complex forms of

play have an independent motivation. This is very nearly in accord with our model, which holds that complex *and stereotyped* play may follow (1a).

### *Why Humans Play*

Before attempting to give an explanation of why humans play, we need to first assess the extent to which our animal model carries over to humans. Our animal model consists of a modified drive surplus theory, two theories of intrinsic motivation, and playfulness. The theories of intrinsic motivation were developed using both human and animal experiments and are explicitly intended to apply to humans, so there's no problem carrying it over into this section. Unfortunately, the drive surplus theory and the behavior systems model were intended to explain the instinctual behavior of animals; thus, we cannot simply import the modified drive surplus model. How and if the model applies to us humans is a complicated matter. Humans pose an interesting problem in virtue of our complex and flexible behaviors, which has led many to conclude that humans have fewer instincts in comparison to animals. Others, notably philosopher and psychologist William James (1890), have been led to the opposite conclusion, that humans in fact have a *greater* number of instincts. This matter obviously won't be resolved here. What we can say is that it would be a great surprise if the motivational system of humans didn't at all resemble the motivational system of animals. In all likeli-



hood, there are independently motivated behavioral modes that play some role in the production and shaping of human play.

### THE MOTIVATION TO USE CAPACITIES

The independent motivation of behavioral modes might be indicative of a more general truth about motivational psychology, namely that we are motivated to use whatever innate capacities we have. In animals this might apply to behavioral modes like stalking or chasing. In humans it might apply to capacities as simple as walking or as complex as counterfactually reasoning. If we have an ability, more often than not, we will find a way to exercise it, even if it is a mere exercise that is not aimed at satisfying any valuable goal.

We can find a particularly stark example of this when we consider the congenitally blind's drastically higher rates of visual synesthesia, color associations with stimulus properties from other modalities. In such individuals, there is the presence of the capacity to process visual information but an absence of visual information to process. Rather than letting the capacity go to waste, the brain "finds a way" to use it. The visual cortex starts processing other types of information, information that is entirely unrelated to vision.

Like synesthesia, play may be a type of solution to the problem of unused capacities. Consider the predatory play of cats. This is most frequent in cats that

haven't hunted in a while and have a predatory capacity that is going unused. Kittens fall under this category because they *cannot* yet hunt. In the absence of prey stimuli, the predatory capacity begins to process non-prey stimuli *as if* they were prey stimuli, just as the synesthete may process auditory stimuli *as if* they were visual stimuli. The same can be said of uniquely human forms of play, like that of pretend play. As Gopnik argues, pretend play could be a way of developing counter-factual reasoning skills. It could be that pretend play is the brain's solution to finding a way to use this reasoning ability. It invents "pretend" problems for the capacity to solve *as if* they were real ones.

It's not mere speculation that we are independently motivated to use our capacities. If this were true, it would make sense of the general finding that as capacities come online, new forms of play emerge that utilize them. For instance, a child will begin locomotor play just as soon as she acquires the ability to locomote. Object play appears as soon as children are able to manipulate objects.

The principle I am proposing, that in general we are motivated to use the capacities that we possess, is similar to Rawls' (1971) "Aristotelean Principle", which claims that we, as humans, take pleasure in expressing our talents. "Others things equal, human beings enjoy the exercise of their realized capacities (their innate or trained abilities), and this enjoyment increases the more the capacity is realized, or the greater its complexity" (Rawls 1971, 426; cited in Flanagan 1991, 113). However, there are several important differences in comparing these two motivational principles. First, my

claim is not about enjoyment *per se* but motivation. For certain, we are motivated to do things we enjoy<sup>15</sup> but we may not enjoy things that we are motivated to do. Second, I do not have “trained” abilities in mind when I make this claim. My use of “capacity” corresponds to the powers of an innate, more or less discrete mechanism. If the mind were a tool box, a capacity would be an individual tool rather than ways a tool can be used. Lastly, I am not making any additional claims about the degree of complexity or realization of a capacity's use, though these ideas line up nicely with what has been said about the motivational power of competence and challenge.

## SELF-DETERMINATION THEORY

In addition to what we have been able to carry over from the previous section, we can supplement our model with psychological research on humans. Among the many theories of human motivation, self-determination theory (SDT) is perhaps the most prominent and well-tested (e.g. Deci 1975, Deci and Ryan 2000, Deci and Ryan 2012). SDT is centered around the distinction between autonomous and controlled motivation. Autonomously motivated activities are ones in which the actor fully endorses and voluntarily partakes. Often these are intrinsically motivated activities, activities that supply their own motivation. However, extrinsically motivated activities, which depend on goals separable from the activity itself, may be autonomously motivated as

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<sup>15</sup> This may not be true of those suffering from amotivata. Nevertheless, it is generally true for normal individuals.

well. For instance, you may play peek-a-boo with your niece, and when you do you are likely extrinsically motivated. You are motivated to participate not out of the sheer fun of playing peek-a-boo, but out of a desire to entertain your niece. Even if you are extrinsically motivated, you may still be autonomously motivated. This is because you have internalized the goal of entertaining your niece; you fully endorse it; you see it as an expression of deeply held values. Controlled motivation, on the other hand, typically occurs when you feel pressured to do something. A jargony way of putting this is that you see the “locus of causality” outside of yourself. This often happens when one is required to do something by an authority figure, whether it be a parent, boss, or school teacher. Motivation can be controlled in less obvious ways as well. For instance, you might feel “controlled” by an extrinsic reward like money, grades, fame, or approval. While there’s no threat of punishment, the positive goal that you are working towards is not fully internalized. Unless you’re Ayn Rand, working to maximize your income is not extension of your values in the way that an altruistic act might be. It is important to note that the distinction between autonomous and controlled motivation exists on a continuum. Extrinsic motivation can fall under either category or somewhere in between depending on the degree of internalization of the extrinsic goal.

Where older theories of motivation have focused on the *strength* of motivation, SDT draws attention to the *quality* of motivation. Controlled motivation can be every bit as strong as autonomous motivation and in many cases even stronger. What’s inter-

esting is the differences in psychological outcomes. Autonomous motivation is associated with an increased depth of understanding, performance, and a number of markers of psychological well-being like positive affect and reduced levels of anxiety.

As SDT became more established, correlates to the theory were added. Of particular relevance to us is the claim that there are three innate psychological needs universal among human beings. The first is a need for *autonomy*, a sense of self-determination. Autonomous actions are ones that are not coerced but rather are chosen and endorsed by the actor. These foster a sense of freedom and control over one's life. The second core need is that of *competence*. One is competent, in this sense, only if she is skilled at some task that is of some challenge. Self-efficacy can be an important component of competence. One's actions need to be perceived as bringing about an intended effect. However, competence need not involve anything of physical consequence. It can also refer to a display of knowledge, which is mastery of its own sort. Lastly, there is *relatedness*. This refers to a feeling of interconnection, that one is important to and cared about by others. One must believe that one is held in high regard and is secure in her relationships.

Deci and Ryan claim that autonomy, competence, and relatedness are necessary for achieving and maintaining psychological health. They are universal requirements for well-being and optimal functioning such that failure to meet any one of the needs will result in detrimental effects. "We [Deci and Ryan] assert that there are not

instances of optimal, healthy development in which a need for autonomy, relatedness, or competence was neglected, whether or not the individuals consciously valued these needs” (2000, 229). Not only are the needs for autonomy, competence, and relatedness important for long-term growth and well-being, they are thought to be modulating factors of intrinsic motivation. Need fulfillment can enhance intrinsic motivation and make participants more interested or engaged. When needs are actively thwarted, intrinsic motivation wanes, and the activity is less likely to be continued. Deci and Ryan are quick to point out that the SDT needs do not give an exhaustive account of intrinsic motivation. Similar to our previous account of intrinsic motivation, they stress the importance of “novelty” and “optimal challenge” in determining what we will find intrinsically motivating (Deci and Ryan 2000, 233). Needs are best thought of as “nutriments” to intrinsically motivating activities; they facilitate interest without necessarily guiding it.

SDT needs can help us flesh out our theory of why we play if we can link play to need fulfillment. Without too much effort, we can see how play might provide us with a sense of autonomy since play is prototypically a voluntary endeavor. We generally get to choose not only what to play but how to play. Solitary play exhibits autonomy in its purest form. Every aspect of the activity is controlled by the participant. Group play can be an exercise in autonomy as well. Even if the rules or customs of the activity are constrained by group dynamics, participants in organic group play are vol-

untarily partaking and may have some democratic (or undemocratic) influence over the way play proceeds.

Play often involves skill and thus reinforces a sense of competence. Sports are a clear-cut example of this. But play need not take the form of a sport or even a game for competence to play a role. Object play can be thought of as a method to gain competence with respect to the physical world. For example, when a baby shakes her rattle she learns about the sounds and movements that she has caused. Once these relations are mastered and the baby can easily predict the consequences of like actions, she has achieved a certain level of competence. After mastery, the child proceeds to other, more difficult challenges, new domains for her to acquire competence.

Play is an important source of relatedness for children and adults. It is a medium for socializing. This is as true for playgrounds as it is for golf courses. Consider how many billions of dollars of business deals have been struck over a round of golf. It's clearly more than just hitting a ball with a stick; it's about building trust and rapport. Group play is often cooperative or collaborative. In such cases, individuals are brought closer together by a joint goal. Michael Tomasello (2000) claims that such joint ventures engage the uniquely human capacity for shared intentionality or a sense of "we-ness". The activity is conceived as something *we* are doing not just *I*. In this way, play can be seen to strengthen social bonds and build a sense of comradery.

Showing how play can satisfy the SDT needs does two things. First, it bolsters our account of how general processes can motivate play. Second, it gives us some purchase on the question of why we play what we play. Many activities can provide us with stimulation or challenge. Many can provide ways in which we can exercise our capacities. However, this range of possible activities is constrained by the extent to which they satisfy SDT needs. All things being equal, play that does more to fulfill our needs should be more common than play that does not.

## HUMAN PLAY PHENOMENA

The list of phenomena that we attempted to explain in the animal play section is largely conserved for human play with two very notable exceptions. First there are no forms of human play that are stereotyped (i.e. universal) *and* complex. There are stereotyped forms of human play. For example, object play (e.g. manipulating, waving or throwing an object) and locomotor play (e.g. running around for no reason) are stereotyped between individuals but are also decidedly rudimentary compared to, say, the rough-and-tumble play of canids. Dog wrestling is replete with rules about where one can bite, how hard one can bite and even requires that participants take turns. Nothing approaching this complexity is manifest in object or locomotor play. We can explain the uniformities in object and locomotor play by appealing to general human motivations toward stimulation and competence. There are only so many domains in



which a baby can become competent and so many ways in which she can be stimulated. It's only after basic skills are acquired, in part through these rudimentary forms of play, that more complex skills enter the fold and usher in more complex forms of play.

Just as there is universal play that is not complex, there is complex play that is not universal. Games are a good example of this. Despite the millions of games played by humans there is not one that is universal. Dogs have a universal wrestling game. Humans have Greco-Roman, freestyle, no-holds barred, mud, even thumb wrestling. Soccer might be coming close to universality; however, we know this to be a product of human ingenuity, not biology.

Human play also does not have innate, universal play signals. There's no play bow, play vocalization, or hand gesture that triggers play sessions. The closest we come to an animal-like play signal is the smile or the laugh, but these are merely signs of happiness, not signals specially designed to initiate or maintain play. This may be due to the lack of need for play signals. Once an individual is verbal, expressions like "Let's play" or "Let's keep playing" can fulfill the function of play signals.

Because there are no universal play markers or stereotyped and complex forms of play, the reasons that we might want to endorse the independence thesis (1a) for humans are absent. Thus, we can maintain that human play naturally arises from other behavioral-motivational systems and domain-general processes like playfulness. That is,

we can maintain this so long as we are able to explain some additional phenomena that are unique to humans.

1. Play comprises significant portion of daily activity for a longer stretch of the individual's life.
2. Adult humans play more than adults of other species.
3. Humans engage in pretense play.
4. Humans play games.
5. Human play is more diverse and complex than animal play.

Let's address these in turn.

#### I. MORE PLAY FOR A LONGER PERIOD

Young humans spend a considerable amount of time in play, and this high-play period comprises a greater proportion of the human life than the life of other animals. However, humans also have an elongated period of childhood compared to other animals, including the great apes<sup>16</sup>. Thus, we can explain this phenomenon by appealing to the fact that juveniles play more than adults. Our account of this fact is similar to the one for animals. Children are more playful and have a greater need for physical activity. They also don't work, which for adults, may be a means of exercising capacities and satisfying needs for autonomy, competence, and relatedness.

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<sup>16</sup> See Konner (2010) for a lengthy discussion of this.

## 2. INCREASED ADULT PLAY

Mature humans spend a larger proportion of their time playing than do most other animals. This can largely be attributed to the enhanced efficiency with which human beings satisfy basic survival needs. For a considerable proportion of the global population, adult humans have more leisure time than ever before and have access to a superabundance of resources. While modern work has increased efficiency, it has had a narrowing effect on the range of capacities that are utilized in work. Jobs tend to be specialized now. The goal is not to be competent at an array of skills but to excel at select skills or to be willing to execute non-skills. Gone are the days of the hunter-gatherer-carpenter-teacher-parent-chefs. Given that work no longer provides the opportunity to express the same range of capacities, we might see play as being more desirable for the adult human than, say, the adult puma who exercises all of its capacities as a means of survival. We are more motivated to use our capacities in play precisely because they would otherwise go unused.

## 3. PRETEND PLAY

Pretend play is the natural outgrowth of our possession of the capacity to be creative problem solvers (as Carruthers 2002 claims) and to be counterfactual reasoners (as Gopnik 2009 claims). We have these capacities that seek expression, and pretend play is

the common solution for doing so. Moreover, it also provides an enriched, albeit imaginary, environment from which to glean stimulation and challenge.

#### 4. GAMES

Why do humans play games? Why should we make our play rule-governed? One might appeal to a human capacity for creating and observing rules, arguing that games are a way for us to exercise these normative abilities. While this may be true for some very young children, most of the time it doesn't seem that we play for the sake of rule-following, but rather that we rule-follow for the sake of playing. Rules make possible ways of playing that are inherently more interesting to us. One could play soccer without the rule that prohibits using your hands, but having the rule makes it a more interesting, challenging game.

#### 5. DIVERSITY AND COMPLEXITY

We can account for the diversity and complexity of human play in several ways, first by appealing to our vast intellectual capacities, which are unique in regard to both their quantity and their open-endedness. There is no limit to the number of ways to express the human mind, and similarly, there is no limit to the number of ways to entertain the human mind. No animal possesses the same appetite for stimulation and challenge. This appetite rewards human ingenuity and nourishes the will to invent new forms of play.

## *Empirical Predictions*

The two psychological models I've advanced, one for animal play motivation and one for human play motivation, make a number of empirical predictions which include but are not limited to the following: (1) *A form of play will be preferred to another insofar as it does a better job of recruiting the aforementioned intrinsic motivators.* All things being equal, people will choose play activities that express capacities and provide stimulation and challenge over activities that don't. (2) *Individual differences in play habits will reflect individual differences in intrinsic motivation.* If one has a general preference for lower levels of stimulation or challenge, one will play things that are less stimulating or challenging. (3) *The structure of intrinsic motivation is manifest in play habits.* This is likely to be controversial. The basic idea is that play practices have and will tend toward activities that best exploit distinct features of our psychology. For example, we see achievement, competition, cooperation, and imitation in many forms of human play, and indeed, many play activities are centered around these various dimensions. I see this as indicative of achievement, competition, cooperation, and imitation being innate human motivators, precisely because stable play practices are the best found ways of exploiting innate human motivators. (4) *Playfulness is a real, useful psychological and neuroscientific construct.* Playfulness is a distinct phenomenon that has at least three testable features. First, the model predicts that, when playful, individuals will be more likely to engage in and enjoy a range of intrinsically motivating

activities, not just play. Second, being carefree, uninhibited, and creative will co-occur during times of perceived playfulness. Lastly, analogues of human playfulness exist in evolutionary neighbors. (5) *Once playfulness is established as a robust phenomena, it will be observed to decrease with age.* This is rather straightforward.

### *Concluding Remarks*

We took the seemingly simple why question of play and analyzed it into a number of distinct issues. First, we looked at proposed evolutionary functions of play, whether play was an adaptation, co-opted adaptation, or co-opted spandrel. Then we examined Burghardt's (2005) theory about what conditions were necessary for the emergence of play. The second half of the chapter was occupied by looking at how play was motivated in both animals and humans, an investigation which resulted in the advancement of two novel motivational models of play. The animal model appealed to Leyhausenian motivations adapted to the behavior systems model, motivations toward stimulation and challenge, and playfulness. The human model used the animal model as a framework and additionally appealed to the motivation to exercise capacities and to satisfy the needs of autonomy, competence, and relatedness. Together, predominantly non-play motivations can do the bulk of the work in explaining human play and show that there is no need to posit a special play motivation, instinct or system. There's nothing

that actively shapes our play into determinate forms, but rather, play migrates toward forms that best satisfy our general motivations.

## CHAPTER 3

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# Why we ought to play

### *Ethics and the Psychology of Play*

Where the previous chapter's focus was primarily biological and psychological, this chapter's focus is decidedly philosophical. Nevertheless, there is a close connection between these two lines of investigation. We developed a picture of why we play, now it is our task to draw out the normative implications of this picture. What we will find is that we ought to engage in play, the right sort of play, because it is the best means of furthering a number of positive human ends. This claim brings with it special obligations with respect to the treatment of children's play practices. Going further, we will discuss the implications of the psychological phenomenon of playfulness and what special obligations it issues to us.

### FOUR THESES REVISITED

To start, it will be helpful to review our four theses about the psychology of play.



(1a) A unique behavioral-motivational system produces play behavior. (Independent Motivation)

(1b) Play satisfies a psychological or physiological need unique to play. (Independent Need)

(2a) Behavioral-motivational systems not specific to play, ones with alternate functions (e.g. predation, foraging) or ones that are used for general cognition, produce play behavior. (Motivational Dependence)

(2b) Play satisfies psychological or physiological needs not unique to play. (Need Dependence)

By explaining the human play phenomena without appealing to a unique play behavioral-motivational system, we're left with insufficient reason to hold the independent motivation thesis (1a). But even if we hold that play is motivationally dependent on other systems, this does not imply that play satisfies needs not unique to play (2b) nor does it rule out the possibility that there is a unique need to play (1b). These matters have been more or less untouched, but will receive a proper treatment later in chapter.

### *Privileged Capacities*

There may be no hard and fast normative implications that come with the denial of (1a); however, I am reminded of two philosophical arguments that indirectly touch on

the issue. The first is Aristotle's *ergon* argument. In *Book I* of the *Nicomachean Ethics*, Aristotle finds himself searching for the highest good, something which is good for its own sake and nothing else and something for the sake of which other things are good. This good is *eudaimonia*, which with some imprecision can be translated as “flourishing” or “living well”. Aristotle argues that to be *eudaimon* one must be a good person, and for something to be a good anything, it must be good at its function. What then is the function of a person? Aristotle claims that it must be something that distinguishes humans from other beings. Aha! A human's function must involve the capacity for rationality, or in Aristotelian terms the activity of the rational part of the soul, since plants and animals do not have this capacity. *Eudaimonia* then is a matter of an excellence in exercising rationality.

The other argument comes from Kant who claims that we have an imperfect duty to cultivate our talents. He reasons that we can conceive of a world in which no one cultivates their talents, but we cannot rationally will that this world should be our own. Thus, we have a duty to cultivate our talents as long as it is not in conflict with our perfect duties.

I'm not particularly compelled by either argument. In regard to Aristotle, it's not clear why the function that distinguishes us from other organisms is of such great importance, nor is it clear that excellence in function is the highest good. In regard to Kant, it seems too strong to say we have a *duty* to cultivate our talents. It may be ratio-

nal, pleasant, or even benevolent for us to cultivate our talents, but it doesn't seem, to me anyway, that we have a moral duty to do so.

Perhaps I should have been reminded of Rawls (1971) who has sympathies for both Kant and Aristotle. As discussed previously, Rawls' Aristotelean Principle states that in general it is *pleasurable* for us to use our capacities, and taking this psychological principle as fact we could very well tease out some normative implications. But this doesn't get at the deeper importance of exercising certain innate capacities.

To illustrate this last point, let us consider for a moment a person making the following proclamation: "From here on out, I'm going to disregard my capacity for vision. I shall wear a blindfold and never see again". This is of course both strange and irrational, but human beings are prone to doing strange and irrational things. For instance, it's not uncommon, or at least not as uncommon as it should be, for people to voluntarily amputate healthy limbs. Now, it is certainly true that people can live a full life without sight or intact appendages, but there is a sense in which these people have squandered something valuable, that they have shut themselves off from distinct avenues through which they could find fulfillment. They are not only giving up on being able to partake in certain activities, they are needlessly foregoing *ways* of experiencing the world. This is important: it's not merely that they will experience less pleasure as a result of foregoing these capacities; it's that they will lose out on entire modes of experience. Consider the innate capacity to feel sadness. This capacity has the special

value that I've described but not because its exercise is pleasurable. It is valuable in spite of its being *displeasurable*! The experiences of a person who has *never* felt sadness are incomplete, unsettlingly limited. This is not to say we shouldn't prefer to be a person who has never felt sadness, but only that it would be good for such a person to experience some sadness. Having the capacity for sadness, like having vision or limbs, has a special value because it broadens the range of possible experience<sup>1</sup>.

No two experiences are completely alike. The surprise one feels at receiving a birthday present is not identical to the surprise one feels at receiving a work bonus. Nevertheless, they both exercise the capacity to feel *surprise* in the same way that seeing an apple and seeing a fire truck exercise the capacity to see *red*. Experiences form natural groupings, which I call 'modes of experience' or 'ways of experiencing the world', around the exercise of capacities. Capacities provide the granularity to modes of experience.

We are now ready to address the import of denying the independent motivation thesis (1a). There is an ability to play but there is no play capacity, no unique play system, but rather a variety of systems which give rise to play. Playing is not a distinct way of experiencing the world even though it may depend on capacities that *do* offer distinct ways of experiencing the world. The important point is that the capacities on

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<sup>1</sup> It's not necessarily true that any innate capacity that offers a different mode of experience has a special value. There may be possible capacities that are so unpleasant that they offer nothing in the way of value and should always be avoided. However, no actual capacities seem to fit this description. Even something like pain may be good for us to experience once and a while, so long as it is of a moderate intensity and duration.

which play depends may all be exercised through non-play activities. There's no mode of experience that is unavailable to the person who chooses not to play, and one may perfectly well choose not to play without sacrificing something with the special value I have described. In this way its disanalogous to foreswearing vision or amputating a healthy limb.

Though play does not have the special value associated with certain capacities, it will be helpful to elaborate on what it means to have this special value for reasons that will become clear. A capacity's having such a value does not entail that people should be prohibited from squandering it. This is too gross an infringement on autonomy. However, I see the value as engendering an obligation to protect the use and cultivation of such capacities in others. All things being equal, we ought to make an extra effort to ensure that one has the liberty to exercise and develop one's experientially rich capacities.

Of course, no one's knocking at your door demanding that you relinquish your vision, your limbs, or your sadness, so it may not be clear yet how such an obligation could be important. Perhaps a non-human example will do some to illustrate this and the special value of these sorts of innate capacities. Consider a house cat that is kept indoors and not permitted to hunt. There is good reason to think that for cats hunting is the type of capacity that for humans would have the special value I have described. Hunting is also the type of capacity that I claim play is not when I deny (1a). There's

something missing for a cat that is unable to exercise its hunting instinct; there is an incompleteness that cannot be replaced by the use of other capacities. In short, it is not able to live the fullest kitty-life possible.

However, there are two very good classes of reasons for not letting cats outdoors. The first has to do with the realities of outdoor life. There are cars, pests, diseases, and predators that exist outdoors that do not exist indoors. Second, and more importantly, it's not true that indoor cats are unable to exercise their capacity to hunt. They may be unable to hunt, but their capacity to hunt can be exercised through the power of play. Cats can chase mice on strings, invisible mice; they can chase their feline companions or their owners. Thus, it is through play that indoor cats have the opportunity to flourish as felines. It is in virtue of play's being dependent on other behavioral-motivational systems that play can have this effect.

## THE ETHICS OF PLAYFULNESS

While it looks to be false that there is a distinct play capacity, we do have the capacity for playfulness, and this is a candidate for being of the privileged sort. Playfulness may very well offer a unique way of experiencing the world in the way that having a right arm or color vision does. Certain types of experiences are not possible without playfulness. Not only does it amplify intrinsic motivation, it contributes to the quality of the experience. It lets us feel free from worry and doubt, to be creative and uninhibited. It's

not clear that all of these associated qualities are duplicable without genuine playfulness. In other words, playfulness may be a distinct brand of experience; it allows us to feel in a certain way, a way that cannot be untangled or analyzed into the exercise of subsidiary capacities. I'm suggesting that there is no replacement for the experience of playfulness, and further that we have an obligation to protect the expression and cultivation of our capacity for playfulness.

It might be fruitful at this point to tie playfulness to another ethical concept, that of virtue. To do so, we must introduce a way to refer to the character trait corresponding to the deployment of the playfulness capacity. This will be accomplished using italics. Let's use '*playfulness*' to refer to how and to what extent a person exercises her playfulness capacity, and '*playful*' to refer to an individual who uses the capacity for playfulness more than most. As we will see, *playfulness* has many virtue-like properties. First, it lends itself well to Aristotle's characterization of virtues as being a mean between extremes. At one extreme, one can be too *playful*: careless and flip. Not *playful* enough and one is stern and abstemious. To be virtuously *playful* one has to exercise playfulness at the right time and to the right degree.

Second, *playfulness* like all virtues, contributes to one's flourishing and the flourishing of others. It's hard to imagine someone flourishing to the fullest extent without being *playful* for one's own sake or for the sake of others. This is most obviously true for children but holds for adults nonetheless. For adults, *playfulness* contrib-

utes to flourishing in two ways. First, it allows them to bring joy to others and themselves. It's a contagious phenomenon. Playfulness multiplies in groups of like minded individuals and may be extinguished by even a slim minority who fail to partake. Being playful allows others to be *more* playful and brings with it humor, good spirits, and other qualities that emanate from those who are *eudaimon*. An adult who is incapable of playfulness may be seen as a “party-pooper”, and even worse, may in fact *be* a “party-pooper”. Second, the ability to be playful can ward off feelings of alienation. In order to flourish, one needs to be able to relate to others and oneself, and in order for the adult to relate to the child it is helpful, if not necessary, for one to revisit the child's state of mind. Sometimes the best way to be an elder is to return to the state of the younger. It's to be the silly grandmother instead of the wise grandmother. Deploying playfulness helps us relate to the child's mind that is so preoccupied with this capacity, and for this reason, it may be essential that we retain the capacity for playfulness when we attempt to make sense of our former, more *playful* selves. When recalling memories of your young and blissful, playfully playing self, you will undoubtedly feel some genuine feelings of playfulness rekindle. To truly remember is to recreate. If one is unable to feel playful while attempting to relate to memories from childhood, these memories may seem alien, the movements, feelings, decisions inexplicable from your current perspective, just as the movements, feelings, and decisions of the playful child may seem alien to a serious, adult eye. Thus, there is good reason to think that *playfulness*, even at



an advanced age, is critical to being able to relate to the youngest generation and to integrate their oldest memories into their present psyche, or more generally, to warding off alienation from the playful mind.

If *playfulness* is a virtue, it is unique in that it becomes more, not less, difficult to maintain into adulthood. For certain, adults may be better at knowing *when* to be playful, but they may not always be able to be playful when they should be. Children on the other hand do not seem to have this problem. *Playfulness* may also be a more central virtue for children as compared with adults. To flourish as a child may put a greater emphasis on *playfulness*, an emphasis that recedes with age. In this way, *playfulness* would be unlike the more canonical virtues of courage and temperance, which grow in importance and facility.

### *Play and Needs*

Having addressed the implications of the denial of thesis (1a), we can shift our focus to the needs theses (1b) and (2b). Before we can examine whether there is a need to play we need to have an account of what a need is. Simply put, a need is something that is necessary for well-being<sup>2</sup>. The necessity here is weak. It is not to say that in all possible worlds well-being is only achievable when needs are met; the claim is merely that in worlds reasonably close to ours, where humans are roughly the same as they normally

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<sup>2</sup> This is similar to Deci and Ryan's (2012, 87) definition of need: "organismmic necessities for health".

are, needs are preconditions of well-being. They are the sorts of things for which there are no substitutes. For instance, we have a need for oxygen. Without oxygen in our bloodstream, our cells cannot carry out aerobic respiration, and we will die. One might think we have a need for eating, but on this account we do not. Rather, we have a need for sustenance. We can receive this sustenance intravenously or through a feeding tube, making the physical act of eating, strictly speaking, replaceable<sup>3</sup>.

The needs for oxygen and sustenance are natural candidates for physiological needs. But what distinguishes a physiological need from a psychological need? Perhaps it is, as Deci and Ryan (2012) argue, a matter of the distinctly physiological effects of a physiological need's not being met? Close examination will show that this will not do, since there are also psychological effects of these physiological needs not being met. A person with a deficit in blood-sugar might have difficulty concentrating or be grouchy and otherwise unhappy. If a person's blood-sugar level gets low enough, they will have the greatest of all psychological maladies, that of ceasing to have a psychology. Likewise, deficits in psychological needs can also have physiological effects, so we cannot simply distinguish psychological and physiological needs on the basis of the quality of their effects. Perhaps then we should classify needs on the basis of the inputs required

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<sup>3</sup> This was not always the case, in fact it's only very recently that eating has become replaceable. Does this make it such that eating used to be a need but is no longer? It depends on how we construe "reasonably close" possible worlds. If reasonably close worlds include worlds in which future technology was available, then it looks like eating never was a need. Following this construal, we cannot presently know what needs we have because we don't know what the future will hold. Let's avoid this needless complication and make "reasonably close" reasonably close enough.

for their satisfaction. Psychological needs have exclusively psychological inputs, and physiological needs have exclusively physiological inputs. After all, no amount of socializing will cure a lack of oxygen, and no amount of breathing will cure a need for relatedness. However, at some level of description the satisfaction of any need can be expressed in terms of physiology. It may require that one go down to the level of cell biology or perhaps even molecular biology, but it can be done.

A natural way of proceeding is to say that psychological needs are ones in which the inputs necessary for satisfaction are best understood in psychological terms and those of physiological needs in physiological terms, and the satisfaction of either type of need is required for either psychological or physiological well-being. This definition is something of a defeat to philosophers who love precision. It is not precisely clear what the meaning of “best understood in psychological or physiological terms” is. We will have to live with such ambiguities.

I would be remiss as a philosopher if I did not discuss what is meant by “well-being”. The default philosophical account holds that well-being is that which is “non-instrumentally or ultimately good *for* a person” (Crisp 2013). This misses the mark in terms of what I need out of the notion. When I say that deficits in needs produce detriments to well-being, I’m not saying that these needs merely decrease what is good for someone. If this were the case, we would have to say that some people have a need to listen to The Beatles or eat ice cream or get Swedish massages, since all of these, when

absent, may decrease what is non-instrumentally good for a person. Hesitantly, I will offer my own notion of well-being. An individual who has no detriments to well-being is healthy, fully-functioning, at least reasonably happy, non-depressed, and is in all other respects normal or better than normal. If there is a detriment to well-being something has gone wrong; it is not merely that one is not as happy as one could potentially be.

Well-being, in my sense, is an objective phenomenon. It depends not on one's attitudes toward oneself, but rather on criteria that are in principle independently verifiable. The psychological dimensions of well-being are no exception. Though we can't yet tell how happy a person is or open up their brain and tell if they are depressed or not, we have to assume that there are objective criteria through which these could be determined.

## STATUS OF SDT NEEDS

Are autonomy, competence, and relatedness in fact needs? It must be said that none of these are needs exactly, because these qualities are not necessary to well-being. One could be autonomous, competent, and related and not know it and be psychologically unwell because one does not know it<sup>4</sup>. On the other hand, one could go through life blissfully ignorant in thinking that she is competent at chess only to find out some time

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<sup>4</sup> Even though the *perception* that one is competent may be a *subjective* state, it can cause a detriment to *objective* well-being.

later that she is quite lousy. What is critical is either the *perception* that one has these qualities or the *feeling* that one has these qualities<sup>5</sup>. In some instances, *perceiving* and *feeling* may be the same, but in others not. It is not clear whether perception or feeling is a better construal of what the need actually is, and I will defer to psychologists to determine this matter.

Are SDT needs physiological or psychological? They seem to be clearly psychological. Their satisfaction can not be described in terms of a chemical concentration or muscle contraction or otherwise physiological terms. Autonomy, competence, and relatedness are all psychological constructs.

#### “NEEDING” TO PLAY

Is there is a need to play? If there is a need to play, is it psychological or physiological? With the falsity of (1a), we can be sure that there is no one system that governs all of play. This makes it unlikely that there is a need such that all and only play satisfies it in the way that all and only oxygen satisfies our need for oxygen. Still, there may be a need for certain types of play. If there is a need for certain types of play, we can be reasonably certain that this need is related to childhood or perhaps more specifically to development since play does not seem necessary to well-being for adults. It is at least *possible* for adults to live perfectly healthy and full lives without setting aside time to play. The

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<sup>5</sup> In some places, Deci and Ryan (2012) claim that we have the need to “feel” autonomous, competent, and related. Other places they claim that autonomy, competence, and relatedness are needs.

developmental needs one might have for play would most likely relate to some of the functions we ascribed to play at the beginning of chapter 2. These functions can be psychological or physiological. Gopnik's claim that play reinforces counterfactual reasoning is best described in psychological terms, while Byers' (1998) claim that play enables proper motor development is best described in physiological terms. Both of these are related to thesis (2a) and the fact that play *uses* other capacities. Though play may use the capacity to counterfactually reason or to locomote, there are other ways of using these capacities. Instead of play one could have a regimen of physical exercises and counterfactual reasoning drills. If it is the *use* that is the only reason play fills these functions, then we really just have a need to use these capacities and not a need to play. More generally, we can say that if there are other means to the developmental outcomes play produces then strictly speaking play is not a need. Thus, with a limited amount of evidence to marshal, we are moving in the direction of rejecting the independent need thesis (1b) and accepting the dependent need thesis (2b).

### *A Means to Six Ends*

To say that children do not have a need to play is not to say that we do not have an ethical responsibility to allow them to play or to protect their play. Part of the reason is that play is often the best means of satisfying these other needs like the need to develop cognitive and motor skills or to feel competent, autonomous, and related. Another rea-

son is that play is an irresistible consequence of our psycho-physiology. Kids play naturally. It is dubious as to whether you could actually stop kids from playing, much less babies, and it may be impossible for you to stop kids from playing without making them feel thwarted, repressed, and controlled. It is in kids best interest to play, and we have an obligation to protect their interests. This argument will be expanded later in the chapter. At the present moment it will be helpful to analyze the ways in which it is not only in the best interest of children to play, but in the best interest of everyone to play because play is often the *best means* of achieving a number of desirable ends. In general, we can say that the best means is the one that does the best job of achieving its end efficiently, thoroughly, and with the fewest negative consequences. More precisely, the best means is the means that it is in our best interest to pursue. It is my claim that play is often the best means of doing the following:

- (1) Satisfying our psychological and physiological needs
- (2) Expressing and cultivating our innate capacities
- (3) Learning skills or knowledge we desire to learn or are good for us to learn
- (4) Reinforcing good values
- (5) Satisfying desires that could not be otherwise satisfied or should not be otherwise satisfied
- (6) Making us happy, engaged, or otherwise fulfilled

These are all reasons we *ought* to play in the sense that it is *rational* for us to play. I take (1)-(6) to be uncontroversially *good* for agents, all things being equal, and all things being equal, they are *rational* for us to pursue. Thus, we can say that we *ought* to play if play is the best means to any of (1)-(6), so long as there are no preponderating negative consequences and the best means to (1)-(6) does not preclude us from acquiring some other, better good. From this it does not follow that we *ought* to play in the sense that we are *morally obligated* to play and that it would be *immoral* for us not to play<sup>6</sup>; however, it is in virtue of play's being the best means to (1)-(6) that there are the distinctively moral implications that will be discussed later on. With this in mind, let us discuss each of the six points.

#### I. SATISFYING OUR PSYCHOLOGICAL AND PHYSIOLOGICAL NEEDS

Needs can be psychological or physiological, but we can further divide needs into developmental needs and non-developmental needs. Developmental needs are restricted to juveniles and are necessary to their future well-being as mature adults. Non-developmental needs can apply at any stage of the life-cycle. It's not clear what developmental needs exist for humans, nor is it clear what developmental needs play typically satisfies. Due to obvious ethical constraints, there are no studies on the effect of play deprivation on children.

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<sup>6</sup> The waters between the moral and rational ought are admittedly murky; however, I won't try to clean them up here.



Still, this should not prevent us from making some provisional inferences about the role of play in developmental need satisfaction. As discussed previously, play has been implicated in motor and social development as well as the development of counterfactual reasoning and creativity. It is reasonable to assume that there would be deficits in these capacities were play replaced with developmentally-neutral activities, and it's also reasonable to think that these capacities are necessary to adult well-being or if not necessary pretty darn close. There may be other means to developing these capacities, but there's good reason to think that play is a better means than artificial solutions. We evolved with play fulfilling this developmental role, which suggests that our capacities are specially tuned to use play as a developmental facilitator. What is more, and this will be a recurring theme in this section, play is fun. It's an enjoyable, intrinsically motivating activity that kids would do even if it didn't serve developmental needs.

Play can also be the best means of satisfying non-developmental needs. We have already discussed how play can satisfy the psychological needs for feeling autonomous, competent, and related. That play is a good means to satisfying these needs is evidenced by the fact that much play if not most play aids in the satisfaction of all three at once. In addition to SDT needs, we appear to have a psychological need for cognitive stimulation, which, when not met, can have detrimental effects on brain function, particularly in the elderly. Play provides cognitive stimulation so its not surprising that play activities, along with certain other leisure activities, have been associated with a

lowered risk of dementia (Verghese et al. 2003) and for those who have dementia, cognitive stimulation programs that incorporate play have been shown to be beneficial (Spector et al. 2003). Again, there may be other means to cognitive stimulation but more often than not they will not be as intrinsically motivating.

We also have a non-developmental need for physical activity, which is physiological in nature. The detriments that a lack of exercise can have on *physical* well-being are well known, and don't need further elaboration. It is worth mentioning that exercise can have *psychological* benefits like maintaining cognitive function, learning ability, memory, and neuroplasticity (e.g. Cotman and Berchtold 2002), as well as counteract maladies like depression and anxiety (e.g. Byrne and Bryne 1993). Despite the benefits of physical activity, people do not do enough of it. Three potential explanations present themselves. (1) People do not know the benefits of exercise. (2) People do not have time to exercise. (3) People do not enjoy exercise. There may be some truth to (1) and in rare cases (2) may be true, but (3) seems to be the most pressing problem. I myself find running exceedingly boring and uncomfortable. I find lifting weights downright Sisyphean. The only motivation I have to do these activities is extrinsic and relatively controlled. At the same time, I enjoy exercising by playing basketball. I do it for its own sake, not for the sake of exercise. Thus, through play one can satisfy a physiological need, without the psychical cost of the alternatives, making it the all things considered best means. This may not be true for people who enjoy exercise for exercise

sake, but these aren't the people who are at risk for a lack of physical activity. It is these at risk people who have the strongest reason to seek out forms of physical play that they find intrinsically motivating.

## 2. EXPRESSING AND CULTIVATING OUR INNATE CAPACITIES

Earlier, I suggested that the possession of certain capacities provide us with modes of experiencing the world, and for this reason, they have a special value. We have a *prima facie* reason to express and cultivate these capacities because they enable us to experience the fullest range of life experiences. It is beyond the scope of this chapter to elaborate on all of the capacities that might fall under this category; however, we can speak in broad terms about the ways play can contribute to human expression. For instance, chess might provide a means of expressing our capacities for reasoning; golf our capacities for physical coordination; volleyball our capacities for cooperation. Play provides an excellent medium for cultivating creativity, sociality, and excellence in a variety of different capacities including of course the capacity for playfulness.

Part of the reason play is the best means of expressing and cultivating capacities is that in play we have the freedom to determine the ends and the means of the activity. In work activities, the goals are predetermined. If you are hunting, you must kill an animal to be successful. If your goal is not to kill an animal, then you are not actually hunting. Naturally, we choose the most efficient means to achieving an end, which in

work, often *does* involve the expression and cultivation of a capacity. The process of hunting expresses and cultivates certain physical capacities and some mental capacities as well. But we do not get to choose which capacities will be most helpful to us; we are limited by natural realities. In play, we choose our goals and we can choose them so that they bring out the capacities that we most desire to exercise. We can even choose what means are permitted to attain our self-determined goals. In soccer, players are not permitted to use their hands. This impediment ensures that the capacity for pedal dexterity is exercised. You can express pedal dexterity through hunting, but if it is your goal to express pedal dexterity, you're better off picking up a soccer ball than a bow and arrow. It is through self-chosen ends and self-imposed restrictions that we can selectively develop a capacity while still following our natural inclination to choose the most efficient means of achieving an end.

### 3. LEARNING THINGS WE DESIRE TO LEARN OR ARE GOOD FOR US TO LEARN

Humans evolved to play, and evolved to use play to their benefit. Our discussion of the functions of play illustrates how it can have a number of beneficial effects. However, this only speaks to the benefits that drove the evolution of play. Play has many more benefits that may not have been forces in natural selection, and many possible benefits awaiting those who seek out new and better forms of play.

That play can teach us skills owes largely to what was said in the previous section; we get to determine the ends and the means of play activities. We can choose forms of play that utilize the skills we wish to acquire. We can invent play that simulates any skilled activity we wish to perform. Through play we have the ability to become better at things that are good for us to be better at. Plato was mindful of this power. In the *Laws*, the wise Athenian stranger tells us:

Any one who would be good at anything must practice that thing from his youth upwards, both in sport and earnest, in its several branches: for example, he who is to be a good builder, should play at building children's houses; he who is to be a good husbandman, at tilling the ground; and those who have the care of their education should provide them when young with mimic tools. They should learn beforehand the knowledge which they will afterwards require for their art. For example, the future carpenter should learn to measure or apply the line in play; and the future warrior should learn riding, or some other exercise, for amusement, and the teacher should endeavour to direct the children's inclinations and pleasures, by the help of amusements, to their final aim in life. The most important part of education is right training in the nursery. The soul of the child in his play should be guided to the love of that sort of excellence in which when he grows up to manhood he will have to be perfected.

(Plato, *Laws*, *Book I*, 642-644<sup>7</sup>)

Children are the focus of this passage, since they are the ones that play the most and have the most to learn. However, we should not think that the learning benefits of play should exclusively apply to them. They can apply to anyone who wishes to get better at something.

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<sup>7</sup> From the Jowett (1873) translation.

One thing Plato is keen to point out is that children may not naturally play in the way that's best for them. They may not gravitate to the activities that will best serve them as adults. This is especially true for today's youth. In terms of professional development, physical skill has given way to intellectual skill and factual knowledge, and left alone, children can play as much as they like, and they won't learn to read or write, to multiply numbers. For this reason, we have an obligation, as Plato seems to indicate, to facilitate and encourage educational play. In some cases this amounts to providing them with "mimic tools" like toy computers or chemistry sets, while in other cases it may be a matter of providing them with educational games.

Plato seems to think that play is the best means for children to learn their craft because it provides the "help of amusements". However, it is unclear how Plato envisioned this helping relationship. One way the fun of play helps children learn is that it keeps them doing the beneficial activity. It also helps by associating fun with the skill or activity being performed and leads a child to value the activity and value excellence in the activity. These values may carry over to adult life in which having the right sorts of values are important to motivating and seeing the worth in what one does for a living. Lastly, we can see amusements as being important to sustaining autonomous motivation, which, as we discussed before, is associated with enhanced learning and performance. So not only does play make an activity more enjoyable, it allows us to reap the most benefit from it.

#### 4. REINFORCING GOOD VALUES

Values are not just *reflected* in play. The successes, failures, and judgments made in play *shape* the values we have outside play. In the following chapter, I discuss how various forms of play differentially reinforce a variety of values, so I won't say any more about it here.

#### 5. SATISFYING DESIRES THAT COULD NOT BE OTHERWISE SATISFIED OR SHOULD NOT BE OTHERWISE SATISFIED

Everyone has desires that they cannot fulfill and most everyone has desires that they should not fulfill. While there is no avoiding this, we can make it less unpleasant by using play to appease or partially satisfy the desires without literally obtaining the goal of the desire or what I will call 'consummating the desire'. For instance, I may desire to be a professional athlete or musician even though I know this desire will never come to fruition. These frustrated desires can be soothed by approximating them in play. Playing amateur basketball, or video game basketball, or Guitar Hero can serve to appease these unobtainable desires, and it doesn't merely appease by means of distraction. It's not akin to eating ice cream to ease one's desire to be with a former romantic partner. Simulative play can directly, albeit incompletely, satisfy unobtainable desires.

While some desires may be partially satisfied but not consummated in play, others may be able to be genuinely consummated in play and nowhere else. For instance, one may have a general desire to win. Winning is exceedingly rare outside of

the context of play, and may even be an invention of play that has spilled over into other domains. Whether one is a failed congressional candidate or army general or just a generally competitive person, the desire to win is most easily consummated in play settings.

In terms of desires that we should not fulfill, we might look toward aggressive desires. Aggression and virtue do not sit comfortably with one another. I can think of very few instances in which acting out of aggression is the morally best course of action. A notable exception is in games like football. In football, one is expected to be aggressive and the recipients of your aggression may even prefer it that way because it fosters an intensity to the activity. In such games, there is a tacit agreement that aggression, within bounds, is permissible, which makes those acts of aggression morally permissible.

With respect to desire satisfaction, there are some similarities between play and Nozick's experience machine (Nozick 1974). The famous thought experiment goes like this:

Suppose there were an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life's experiences? (Nozick 1974, 42)



The answer Nozick gives is an unequivocal no. His reasoning is as follows. First, we desire to actually “*do* certain things” and “*be* a certain way” (43). The experience machine merely provides us with the *experiences* of doing certain things and being certain ways. Second, we desire to have contact with reality, boundless and concrete, not a limited, artificial reality. Thus, Nozick finds that our desires have greater depth than one might think. Our desire to write a great novel is not merely composed of a desire to experience writing a great novel, it includes the desires to actually write the novel, be the person writing it, and write it in the context of an existing reality. In my wording, we can describe being in the experience machine as *satisfying* our desire but not *consuming* it, and it is with the missing elements of consummation that make the prospect of a life in the experience machine troubling.

Many forms of play give us the realness that Nozick so privileges; it's the experiences that are approximated. There is nothing more real than playing a game of basketball with actual objects and actual people, but the experiences are decidedly different from those of being a professional basketball player; the movements less graceful, the shots less precise, the crowd less fervent. Fantasy play is perhaps a better analogue to the experience machine. When a child imagines a fantasy world, the content of the experiences are identical to those of being in the fantasy world, even if the vivacity of the experiences are not. Video games offer a powerful extension to fantasy play. The content is, like in fantasy play, limited only to the power of imagination, this time of

the game designers rather than the player. The vivacity of the experience however is much greater. You can actually see and hear what is going on inside these artificial worlds. It is reasonable to expect that, as technology progresses, the experiences in virtual worlds will approach those of the experience machine.

There are several advantages that virtual play has over the experience machine. First, you actually are *doing* something, not merely thinking you are doing something. It's just that the thing you are actually doing isn't the thing that you have the experience of doing. Still, you have a causal efficacy over your artificial world, an efficacy that is disturbingly absent from the experience machine. Second, you can *be* a certain way in video games. No, you can't be a race car driver or a superhero, but you can be clever, skilled, and perhaps even courageous. But no matter the extent to which virtual play allows you to do or to be, it does not put you in contact with the reality projected by the game. In this respect, it is no better. However, there is one final and crucial difference that makes virtual play so much more appealing than the experience machine. There's no lifetime commitment! Expulsion from reality is not a requirement of playing video games, though it may be a temporary side-effect.

## 6. MAKING US HAPPY, ENGAGED, OR OTHERWISE FULFILLED.

The last reason we ought to play is also the most simple. It's the reason that most of us play when we do play. It's enjoyable, engaging, fulfilling. Briefly put, it's fun. And it's not fun by accident. Play is our best solution to the problem of how to have fun.

### *As Play Grows Older*

Though play is *our* solution to the problem of how best to entertain ourselves, this is not to say it is the *optimal* solution. We are amid an ongoing search for the play activities that best dovetail with our psychology, a search that takes place on both the individual and cultural-historical level. On the individual level, our play preferences undergo transformations to keep up with the transformations of the young person's psychology. At some time playing with blocks may be most appealing. Later it may be checkers, then chess. Eventually the changes slow and become more subtle, and we may begin to have steady preferences for activities that continue to provide us with stimulation, challenge, and need satisfaction.

In regard to the historical evolution of play, our preferences seem to change gradually. Sports that were popular one hundred years ago, by and large, are still popular today. This stasis can be attributed to the steadying influence of biology on human psychology. Across times and across cultures, we generally find the same types of activities satisfying. Between cultural-historical contexts play may share structural similari-

ties, while exhibiting significant differences at the surface level. Everyone plays games, but not necessarily the same games. To some extent, these differences can be explained by differences in psychology generally and differences in values in particular, but the predominant source of these differences must be considered cultural evolution. The play of humans beyond a certain age is highly influenced by the play practices of those older than themselves. Cultural transmission is by its nature a conservative force, which in conjunction with the disruptive force of ludic innovation accounts for cultural evolution.

### PROGRESS IN PLAY

Play lends itself to innovation because there are always ways of making play more appealing. Not all innovation can be considered progress *per se*. Some new forms of play may be preferred simply because they are new, but cease to be as appealing once the novelty wears off. In other cases, there may be genuine progress. We may have discovered games that are objectively better than the games that came before it. For instance, the medieval man or woman might enjoy basketball as much as we do, prefer it over the games of their time period, and the only reason that they weren't playing basketball in their times was because they hadn't thought of it.

In this respect, we might liken objectivity in play to objectivity in art. Hume (1757/2014) famously argued in “Of the Standard of Taste” that the worth of a piece of

art depends on its capacity to evoke emotions in us<sup>8</sup>. A work that stimulates no one, arouses no pleasure or other emotions can be said to be objectively bad. Similarly, we might try to judge play by the extent to which it satisfies us or the extent to which we would prefer it to other forms of play. However, this will not quite do. Objectively good play must be objectively good for us. Often our satisfaction with and preferences for play will accord with what is good for us, but not always. We discussed six reasons that we ought to play. These are all reasons that *should* shape our preferences, but in fact they do not, or at least have not. We also must take into account the negative effects of play, particularly those that we are unaware of or those that we are aware of but do not dissuade us from playing.

#### REASONS WE SHOULD NOT PLAY

Because pleasure is the guiding feature of play, we may be led to manners of playing and habits of playing that are enjoyable but deleterious. There are several ways that play can be contrary to our best interests. First, play can displace activities that are more important. We may choose to indulge in play when we could be helping others or helping ourselves. Unsanctioned workplace play has become a concern for many employers, particularly since the introduction of Solitaire on the Windows operating system. Alexis Madrigal (2011) of *The Atlantic* estimated that the game Angry Birds would

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<sup>8</sup> This is the core of Hume's account. He ultimately claims that good art is art that which pleases the senses of sensitive, refined critics.

result in \$1.5 billion in lost wages over the course of a year due to employees playing during work hours. Of course, this assumes that workplace play invariably *decreases* productivity, which is dubious at best. Still, at least some of the time and for some people play does get in the way of work or other important activities, potentially to a great extent. There is an increasing awareness that gaming can become an addiction, which by definition entails that the activity persists despite negative consequences.

### *Revising our Practices*

In virtue of the power of play, we ought be looking for ways to use play to our advantage. We ought to be *rationally* compelled to seek out, participate in, and invent play that better serves the reasons (1)-(6). We should be *morally* compelled to encourage beneficial play for children, since children are not fully autonomous and have relatively limited perspectives on what's in their best interest. But the implications run deeper than just revising children's play practices. We ought to revise our work practices to make them more like play.

I'm using "work" as an umbrella term for the daily instrumental activities that are required of us to maintain a functioning society. Crudely put, it's what we do during the day, Monday through Friday. For adults, this is typically a matter of performing tasks for money, though I suppose for some it is a matter of farming, hunting, or gathering. If professional tasks were more like games, is there any doubt that efficiency

and morale would increase? Of course, this is not an easy undertaking, turning work into play, and in many cases it may be impossible. For instance, it's hard to see how one could turn digging ditches or serving coffee into an enjoyable, self-affirming game.

As time has passed, work has undergone a transformation, becoming more and more estranged from its evolutionary roots. Despite all of the technological “progress”, the contemporary worker puts in longer hours at jobs that are less satisfying. I suspect many people would jump at the chance to exchange their job for a job in which they picked wild berries and wove baskets or went hunting and fishing all day. A strong case can be made that people today are less likely to have their needs for autonomy, competence, and relatedness fulfilled by their work than in the past. This makes it all the more important to take time to play. This sentiment is something of a credo for technology giant, Google. They explicitly state that “work and play are not mutually exclusive” on their official list of reasons to work for them. Google encourages employees to play volleyball, Frisbee, chess and other play activities during work hours (Henn 2013). Not surprisingly Google is perennially on the short list of best places to work, and accomplishes this without sacrificing market competitiveness.

While the idea that play can increase productivity at work has only recently acquired momentum, for years we have been implementing recess for children based on the same principle. This is not to say that schools are ahead of the curve by any

stretch of the imagination. In fact, in many ways their underutilization of play is even more glaring than that of employers.

Schooling is a recent phenomenon. Our ancestors in the Pleistocene did not have schools and much less colleges and universities. Schooling is not a biological fixture nor was it shaped by natural selection. It is an unnatural, albeit not unuseful, human invention. Where evolution works with actual psychology and actual outcomes, the human designers of schooling are limited to folk psychology and perceived outcomes. That is, they were limited until quite recently. With the rise of modern psychology with a time-tested scientific methodology, we have greater insight into how children learn and develop, and with this knowledge comes the responsibility to revise our schooling practices.

The problems with schools are many. For all of the talk of budgets and exams and class size, there is little discussion of the deeper problem. We are teaching kids in a way they're not made to learn. The shortest route between two points is a straight line, but the shortest route is not always the fastest. The ideal teacher is not a stack of textbooks. The ideal school is not a study hall, and having a teacher who functions as a speaking-textbook is little improvement. School should resemble the ways children are built to learn, and children are built to learn, in large part, through play.

Part of the problem is motivational. In light of SDT, it's no wonder students are unmotivated. Ryan, Connell, and Plant (1990) found that intrinsically motivated



learning resulted in greater understanding and retention, but there's good reason to think that the majority of students are not intrinsically motivated. They do not feel *autonomous* because they are being forced to attend, forced to be quiet, sit still, forced to learn in a way that is unnatural for them. This final difficulty almost certainly undermines their feeling of *competence*. Sure, some students, the good students, will feel competent, but these are not the kids for whom the educational system is failing. There may be some feelings of *relatedness* fostered by school, perhaps out of collective misery, but by and large education is a solitary pursuit.

At the very least, we can say that more needs to be done to make learning more like play, especially in light of the fact that there has never been an easier time to do so. With computers, it is possible to impart virtually any learnable skill or knowledge in the context of a game. Early efforts to this effect include using basic mathematics skills or touch-typing skills as a means to progress through the levels of a video game, but there is no reason the same cannot be done for different and more complex skills. There is no reason that play could not be used to teach students about grammar, politics, economics, to teach them how to be better readers, writers, researchers, and scientists. Moreover, we do not need to be limited to the fixed responses of a program. Educational games would ideally be ones that are interactive multiplayer environments in which students work with one another as well as the instructor to solve problems.

This would provide students with opportunities to cooperate and compete in addition to helping them feel related to their classmates and teachers.

A worry one might have is that if children are playing all day at school, they will become sick of play and will not feel like partaking in unstructured play in their downtime; they will not get to enjoy one of the things that makes childhood great. However, it seems unlikely that one could get sick of play *generally*. It is possible to get sick of a specific type of play, for instance, one might get sick of playing checkers. But when this occurs, one simply switches to a different game or to a different type of play entirely.

## PROTECTING PLAY

We may be motivated to revise our own play practices out of self-interest, but we should be *morally* compelled to shape children's play in accord with their best interests<sup>9</sup>, where shaping involves encouraging and providing the means to play that furthers aims (1)-(6). However, there is an inherent danger in shaping play. By tampering, we run the risk of tainting what is good and pure about play.

Far worse than mere tampering, the corruption of play has two potential sources. It can result from adults acting out of concern for *children*, and it can result from adults acting out of concern for *themselves*. The first type of corruption leads to a

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<sup>9</sup> To some small extent this is an overstatement. We of course want to shape play in a way that balances the best interests of children with the best interests of people generally. I'm not proposing that we cut funding to nursing homes and invest it in child amusement parks.

direct challenge of the normative implications for which I have argued, a challenge that calls into doubt not only the imperatives to shape children's play but the imperatives to shape adult's play. The second type of corruption is considerably less dangerous to my arguments but considerably more dangerous and pervasive in today's culture. Let's begin with the second phenomenon, adults selfishly corrupting children's play.

For better or worse, competitive youth athletics is has become a mainstay of many children's lives. Sports are being treated less like recreation and more like professional development, even though the chances that such training could result in a career or even a college education are as slim as ever. What is the cause of this cultural shift? It may be true kids today are different than they used to be, but kids are more reflectors of culture than agents of cultural change. The more likely cause is that it has become increasingly acceptable for parents and coaches to pressure children into play that is no longer recreational.

Intensely competitive play can have some benefits. It may instill discipline, focus, and a sense of competence for some kids. But these benefits can't allow us to overlook the glaring downsides. Excessive physical training takes a toll on developing bodies, which is evidenced by the fact that repetitive stress injuries among youths are vastly more common today than they were previously (Turker 2014). But perhaps the more troubling trend is that kids are being deprived of what makes play so wonderful. Play is supposed to be fun. It's supposed to be a place where kids can be free, exuber-

ant, carefree. It's supposed to be a place where playfulness can thrive. One cannot be playful when one is self-critical, criticized by others, and overly concerned with results. Parents who allow this to happen or actively bring this about are shirking the obligations they have to their children<sup>10</sup>. They are impeding the exercise of playfulness, a particularly egregious infringement considering that playfulness can only be experienced in its full force as a child. Taking playfulness from a child is an affront for which there is no proper restitution.

Why do parents and coaches do this? Some of it is pride. They want to be the keepers of prized champions. Some of it is the trumping of vicarious achievement over vicarious enjoyment. A lot of it though is a conflation of desires. They see in their children a yearning for success that is in fact their own. It is an inadvertent selfishness, but a selfishness that is no less harmful.

We have yet to address the possibility that even when we have the best interests of children in mind, the intentional shaping of play is inherently corrupting. That is, when we try to steer play toward (1)-(6), we make it less likely to satisfy (1)-(6). This line of argument can take two forms, one we might call the *naturalness* objection and one we might call the *intrinsic-ness* objection. The first objection proceeds as follows: Human play was shaped by evolution, so the forms of play that “naturally” arise are the ones that are going to be the most beneficial. Therefore, we should not try to shape

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<sup>10</sup> Thanks to Owen Flanagan for this suggestion.

play. There are a few problems with this objection. First, it seems to assume something along the lines of the independent motivation thesis (1a). It assumes that there is some system which reliably steers us to certain forms of play. As I have argued, there is no such system, and play is the result of non-play and domain-general processes. That being said, play behavior may be shaped by natural selection by the co-opting of such mechanisms. If increased play rates in childhood years produces more beneficial play with relatively few negative consequences, then such a trait would have been selected for, but because the processes evolution has to work with are numerous and relatively unfocused, it has limited tools with which to determine what forms of play are produced. It does not have the specificity to make us play baseball as opposed to some other sport that is equally satisfying. Simply put, we evolved to play things that are interesting to us and use our capacities. Within these bounds all play is natural, so we might as well encourage play that also supports (1)-(6).

The *intrinsic-ness* objection holds that by using (1)-(6) as reasons to play, we are changing it from an intrinsically motivated activity to an extrinsically motivated activity. This would undermine the claim that play is the best means of (1)-(6) because the best means arguments depend on play's being intrinsically motivated. There are two problems with this objection. First, play's being the best means to (1)-(6) does not necessarily depend on play's being intrinsically motivated. It does to some degree depend on play's being *autonomously* motivating, but as you will recall, some extrinsically moti-

vating activities can be autonomously motivating as well. Extrinsic motivation is autonomous to the extent that it is internalized by the agent. It's only when motivation is not well-internalized (i.e. the locus of causality is perceived to be outside oneself) that intrinsic motivation is undermined. (1)-(6) are all good candidates for being goals that are well-internalized, so the addition of these reasons is likely to enhance not undermine autonomous motivation.

But even if we suppose that (1)-(6) are not well-internalized, it is not true that these have to be the reasons for playing *while one is playing*. (1)-(6) may motivate us to start playing or to play some things over others, but once engaged in the activity, these reasons need not be the motivating reasons behind continued participation in the activity. We can still play for the fun of it even if at some level it was initiated for instrumental reasons. Thus, the intrinsic-ness objection, like the naturalness objection, do not provide sufficiently compelling reasons to dismiss the normative implications presented in the chapter.

## PROTECTING PLAYFULNESS

Though the *naturalness* objection and the *intrinsic-ness* objection do not undermine the argument that we should shape play in accord with (1)-(6), there is the separate question of whether the shaping of play in accord with (1)-(6) would undermine the exercise of playfulness. Though playfulness is most closely identified with the amplifi-

cation of intrinsic motivation, it brings with it feelings of uninhibitedness, of boundless opportunities, of freedom from concerns, and it is plausible that undermining these associated feelings could in fact undermine playfulness itself.

For sure, we can attempt to shape play in a way that *respects* playfulness and this may in turn further ends (1)-(6); however, there are good reasons not to attempt to shape *all* of play. We can be playful in intentionally-shaped play, but there is a sacrifice being made. The mere attempt to shape play takes away from the exercising of playfulness in its purest form. It takes away from its inherent freedom and creativity.

I propose that each child should have a protected time for playfulness<sup>ii</sup>. This involves giving children free-time to do as they please, without adult moderation though not necessarily without adult supervision. The benefit of having *laissez faire* time goes beyond allowing children to express playfulness to the fullest degree. It gives them full-autonomy over their actions, and permits self-governance among groups of children. As elaborated on in the following chapter, peer-peer interaction without the influence of adults may be important to socio-moral development. Piaget (1932/1965) certainly thought that it was important and in fact necessary for certain moral advancements. By providing children with a protected time for playfulness, we allow them to exercise and develop this capacity naturally, for its own sake. In this way, a protected

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ii This is not the same as having a protected time for play. It may be possible to shape all of the play of a child without inhibiting the exercise of her playfulness, since playfulness and playing aren't coextensive.

time for playfulness may be the best way to satisfy (2), the expression and cultivation of capacities, playfulness in particular. Thus, we have not really undermined the claim that play should be shaped in accord with (1)-(6). It is just that in this case the best means of using play to satisfy (2) is to passively shape activities by protecting them from active shaping.

### *Concluding Remarks*

With the falsity of the independent motivation thesis (1a) we found that there was no discrete capacity to play and thus, no special responsibility to protect play. However, we also found that playfulness could very well be the type of capacity that play is not, and that it should be protected. Our analysis of needs led to the provisional conclusion that there is no need to play, even though it may be the best means of satisfying many different developmental, psychological, and physiological needs, and the chapter ended with a discussion of reasons we ought to play and ways we ought to shape play. All of this culminated in our concluding that work and school should be made to be more like play and that children should have protected time for playfulness.

It may be that a person can flourish without playing, but it is unlikely that a person could have never played and still been in the position to flourish, and it's simply false that that person has never played. Everyone has played as baby, child, or young adult, and everyone has enjoyed the benefits of play. Play is an important part of our



lives, but as I have argued we have reason to make it an even more important part of our lives. It often provides the best means of satisfying our needs, developing and expressing desirable skills and capacities, satisfying frustrated desires, and making us happy. Play is a gift that has not yet been fully appreciated or realized. We ought to continue to make play better by making it better for us. As we go deeper into the digital age and as play changes more rapidly than ever before, this imperative will only grow stronger as will the imperative to be cognizant not only of the relationship between play and ethics but the relationship between play and moral development, the topic of the next chapter.

## CHAPTER 4

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# Play and moral development

### *Morality's Playground*

Plato is often attributed with the following quote: “Watch a man at play for an hour and you can learn more about him than in talking to him for a year.” Some would argue that this is almost certainly misattributed to Plato. They might cite the fact that it does not appear in any of his written works or that his vast dialogic corpus is in fact a sustained argument for the virtues of conversation. I myself hold out hope for a missing dialogue in which Socrates learns the true nature of piety after beating Euthyphro in a thumb war. Regardless of the quote's origin<sup>1</sup>, there is more than a grain of truth to it. We have much to learn from play.

In particular, we have much to learn about morality and moral development. Inquiry on this matter got off to an ambitious start in Piaget's landmark *The Moral Judgment of the Child* (1932/1965). Both incisive and thorough, its study of the game of marbles showed how play might reveal the structure of moral development. However

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<sup>1</sup> The quote was attributed in Plato in *Confidence: How to Succeed at Being Yourself* (1987) by Alan Loy McGinnis. It is likely a variation of a quote from *A Letter of Advice To a Young Gentleman Leaving the University Concerning His Behaviour and Conversation in the World*, a guide to male etiquette by Richard Lingard (1907).

promising, this project was largely abandoned, most notably by Piaget himself who's first work on the topic was also his last.

The goal of this chapter is to renew and update the study of play and morality. Two questions are central to this investigation: How does play *reflect* the structure of moral development? How does play *shape* the structure of moral development? These two questions are often difficult to parse. Play brings with it its own norms of acceptable behavior, of right and wrong that is both analogous to and not wholly separable from those of morality. From the child's perspective, play values may be moral values, and ideal players moral ideals.

To begin to answer these questions, we must take a varied approach, since there is no cohesive literature on play and morality. We can start with a multipurpose discussion of Piaget's *The Moral Judgment of the Child*. The first aim of this discussion is exegetical. It is to come to a better understanding of how Piaget viewed the relationship between games and morality. The second is to assess Piaget's project in light of criticisms and subsequent empirical findings. The final goal is to extend Piaget's project. By building on some of Piaget's insights, I argue that we can make progress on the question of what play contributes to moral development. In particular, we can divide play along with the dimensions of competition, cooperation, and pretense and examine their unique contributions.

## *Marbles and Morality*

Piaget conducted a study of the game of marbles as played by children, all boys, in Geneva and Neuchâtel, Switzerland. Marbles is relatively complicated for a children's game. It consists of an intricate rule system that governs the setup, procedure, and spoils of the game. Winning is not merely a matter of pride; players can capture and keep others' marbles so long as they are justly acquired. Marbles is a particularly interesting subject of study because there are so many different versions played. Rules vary from group to group, neighborhood to neighborhood.

### PRACTICAL UNDERSTANDING OF RULES

Piaget analyzed children's practical understanding of the rules in terms of four stages. In the first stage, children ape the behaviors of the older children with little comprehension of the rules themselves. They may roll the marbles without concern for the outcome, and if they can be said to understand any rules at this stage, they are motor rules, regularities in the movements associated with the game. There is no normative force to these rules, no sense of right or wrong in application.

In the second stage, the "egocentric stage", children have a basic grasp of some of the rules that structure the game. For example, they may know that at the start, marbles need to be placed inside a square or that players throw their marbles from behind the *coche*. They also know that one needs to follow these rules in order to play the

game. However, their understanding of the rules is incomplete and idiosyncratic. Even in groups, each child plays by their own set of rules, and they do not seem to notice that the others are playing by different rules. The concept of winning is also lost on them. They either disregard the notion entirely or claim that everyone can win. This second stage is “egocentric” in the sense that the idiosyncratic rules that the children play with are not known or even noticed to be idiosyncratic. There is a lack of differentiation between the child's viewpoint and the rest of the world.

The third, “incipient cooperation” stage appears around the age of seven. At this point, children play in groups and know that there is a single winner of the game. This may be the first stage in which they can be said to actually be playing the game. Nevertheless, children at this stage do not wholly agree on the rules of play. It's only at the fourth and final stage that there is universal agreement.

Around the age of ten or eleven, children enter the fourth stage in which the rules are fully codified and mutually understood. Children take pride in understanding the rules and being able to discuss the nuances and adjudicate conflicts. Their mastery of the game enables them to start proposing new rules, which are adopted pending mutual agreement.

## RULE CONSCIOUSNESS

According to Piaget, children's rule consciousness "lags behind" their practical understanding. Rule consciousness proceeds through three stages rather than four. In the first stage, rules are optional not obligatory. This is common during the motor and egocentric stages of practical understanding. The rules of marbles get lumped together with other lawlike regularities both natural (e.g. day following night) and imposed (e.g. regular bed-time).

In the second stage, rules acquire normative force. One *ought* to be following the rules and it is bad not to. The children conceive of the rules at this stage as "coercive." They are imposed on them by an external authority, which makes their respect for the rules *heteronomous*<sup>2</sup>. Piaget describes children's conception of the rules as "sacred" or "mystical". They are divine commandments or commandments from the "god-like" parental authorities. The rules are seen as fixed and eternal; they bind all players and all players observe them. Changes to the rules incite protest and are seen as transgressions in and of themselves. When Piaget asked children at this stage to make up their own rules, some objected vehemently at the mere thought. When a child did finally provide a new rule, he was asked about its origin and authority. Surprisingly, some of the boys at this middle stage would respond by saying that the new rules were

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<sup>2</sup> Piaget's uses "heteronomy" and "autonomy" following Kantian precedence.

obligatory to all players and that the rules had always been this way. When asked how they knew the rule, the children would sometimes say that God had told them.

The third stage marks the shift from a heteronomous to an autonomous conception of rules. Children of this maturity are equipped with a thorough practical knowledge of marbles and view the normativity of the rules as stemming from mutual agreement. The rules are seen as conventions and are observed for the sake of fairness and competition. New rules may freely be introduced and are likely to be accepted if they improve gameplay. Rules are no longer coercive but “rational”. Respect for them is autonomous, self-determined, not imposed.

#### MORAL RULE CONSCIOUSNESS

Piaget’s account of morality is structurally similar. The first stage is the morality of constraint. It is characterized by obedience to authority figures, primarily parents. Respect for moral rules is unilateral. It is a respect derived from obedience to and fear of external authorities. For this reason, the morality of constraint is heteronomous, just as the respect for the rules of marbles is before the age of ten. Heteronomy is unavoidable, claims Piaget, because of the inequitable relationship between parent and child. It’s only when the child begins to engage in reciprocal peer interactions that the morality of constraint is overthrown. They begin to consider the viewpoints of others and to take intentions, not just consequences, into account when making moral judgments. Moral

rules are no longer viewed as monolithic commandments but rather as pragmatic solutions to problems of cooperation, which causes children to shift from a unilateral respect for moral rules to a mutual respect, a respect that derives from the peer solidarity and reciprocity. Thus, the shift from the morality of constraint to the morality of cooperation is characterized by the shift from heteronomy to autonomy, the very same shift that was observed in the marble study.

### *Interpreting the Analogy*

It is clear that Piaget saw children's attitudes toward games as elucidating the structure of their attitudes toward morality. This is the reason that the study of marbles was presented in *The Moral Judgment of the Child*. However, we may also wonder if Piaget saw the rules of games as *facilitating* or *shaping* moral development. To answer these questions we need to investigate the nature of the analogy between games and morality. Is it merely an analogy or are there overlaps and interrelations between game and moral cognition? Let us examine which of the following claims Piaget held.

1. Children view game rules as moral rules.
2. Game rules and moral rules share content.
3. Game rules and moral rules are transmitted in the same fashion.
4. Game rules and moral rules are governed by the same set of cognitive structures.



5. The consciousness of game rules and moral rules are part of the same stage.
6. The cognitive structures corresponding to game rules and moral rules have similar functions.
7. Children's consciousness of game rules and moral rules goes through similar transformations.

In regard to 1, Piaget does seem to hold this view. At the outset of his marble study, he writes, "It is of no moment whether these games strike us as "moral" or not in their contents. As psychologists we must ourselves adopt the point of view, not of the adult conscience, but of child morality" (14). Children take games and their rules seriously, and combined with their "naïve" perspective of the moral world, they may view game rules as moral injunctions. For this reason, game and moral rule consciousness are not separable<sup>3</sup>. Piaget claims that children in fact assimilate game rules to moral rules<sup>4</sup>. In other words, they understand game rules in terms of preexisting moral schema. Part of the reason for this has to do with 3. The way the content of the rules is acquired and the respect of the rules is inculcated are analogous. As Piaget writes, "The rules of the game of marbles are handed down, just like so-called moral realities, from one generation to another, and are preserved solely by the respect that is felt for them by individu-

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3 For example, "As all our results have shown, consciousness of rules cannot be isolated from the moral life of the child as a whole" (41).

4 For example, "It is therefore no mere chance that nearly all little children assimilate the rules learned in these surroundings to the moral rules imposed by adults and by the parents themselves" (87).

als” (14). The rules of marbles are learned by the instruction and observation of authority figures as are the rules of morality.

This is not to say that games and morality have the same content. They very clearly have different content in virtue of their being prescriptions about marble throwing and turn-taking and not about lying and harming. Thus, we can reject 2. At the same time, game rules and moral rules seem to be a part of the same content domain. They are both sets of *rules*, and Piaget is out to provide a “psychology of rules”. What this amounts to is unclear. It could mean 4 or 5, that game rules and moral rules are governed by the same cognitive structures or relatedly that they are subsumed by the same cognitive stage. These claims depend on how we interpret Piagetian stages.

Piaget is often taken as endorsing global, rigidly defined stages. This strong interpretation of stages was held by Kohlberg who is seen and saw himself as taking up Piaget's cognitive-developmental project. Lapsley (1996) describes the strong interpretation as divorcing content from structure. In other words, the same structures can govern a wide range of contents, so game rules and moral rules could differ in content while still being governed by the same structures, ones characterized by heteronomy or autonomy. If this interpretation correct, we could find the seeds of an argument for the causal influence of games on moral development. Playing games with peers could facilitate the global shift to an autonomous conception of rules generally.

Lapsley (1996) and Chapman (1988) provide arguments that the strong interpretation of stages should be resisted even though it is the received view. They argue that Piagetian stages should be interpreted as clusters of structures grouped in virtue of their morphological similarities. Stages are descriptive or classificatory rather than explanatory. The interpretation is in part motivated by the fact of Piaget's biological training (he wrote his dissertation on the mollusks of Valais). His biological approach is evident in the use of terms like "adaptation" and "evolution" which permeate his writings. Lapsley and Chapman argue that Piaget was in the business of taxonomizing knowledge, classifying it in the way he had been doing with biological organisms. Stages then are somewhat arbitrarily defined "species" of knowledge composed of individual content-specific structures that have individual histories. They are grouped together not because they partake in the same cognitive structure but precisely because they are analogous.

There are difficulties in accepting either interpretation if we are to hold them up to Piaget's corpus as a whole. In all likelihood, Piaget's own conception of stages changed over the years. (Whether it progressed to more adequate forms is a separate question.) *The Moral Judgment of the Child* appears early in his body of work, 1932, which may suggest it is more reflective of his biological training. In any event, Piaget never indicates that game rule consciousness and moral rule consciousness are a part of

the same stage or are governed by the same cognitive structures. If anything, he takes pains to rule this out. He writes,

Between various types of rules which we shall give there will therefore be at once continuity and qualitative difference: continuity of function and difference of structure. This renders arbitrary any attempt to cut mental reality up into stages... There are therefore no inclusive stages which define the whole of a subject's mental life at a given point of his evolution; the stages should be thought of as the successive phases of regular processes recurring like a rhythm on the superposed planes of behavior and consciousness. A given individual may, for example, have reached the stage of autonomy with regard to a certain group of rules, while his consciousness of these rules, together with the practice of certain more subtle rules will still be coloured with heteronomy. We cannot therefore speak of global or inclusive stages characterized as such by autonomy or heteronomy but only of phases of heteronomy or autonomy which define a process that is repeated for each new set of rules or for each new plane of thought or reflection. (78-79)

There are a number of things to take away from this quote. First, it weighs against the strong interpretation of stages, insofar as *The Moral Judgment of the Child* is concerned. Stages appear to be relative to specific sets of rules. It is debatable how large such sets of rules are, but it is clearly not so large to include both game rules and moral rules. In this way, contents have their own respective structures though the structures corresponding to different contents may share functional similarities. Importantly, this quote undermines one major attempt to interpret Piaget as claiming a causal relationship from game rule consciousness to moral rule consciousness. The evolution from heteronomy to autonomy seems to be a separate process for each set of rules. It sug-

gests that reaching an autonomous conception of game rules does not facilitate such a transformation in moral rule consciousness.

Still, one might wonder if a causal relationship is the reason Piaget thought the marble study elucidates the arc of moral development, the reason moral consciousness goes through a similar transformation as game rule consciousness. However, this reasoning is lacking since the analogy between games and morality is sufficient to do this explanatory work. In the extended quote, Piaget indicates that game rules and moral rules share a similarity of function, claim 6. Together, with the other similarities noted we have a strong analogy. Game rules and moral rules are both sets of *rules*; they govern interpersonal behavior; they are not distinguished by children; they are transmitted in similar fashions and have similar functions. These are jointly sufficient to explain 7, that game rule and moral rule consciousness pass through similar transformations. It explains why the marble study might “throw light on the child’s judgment of moral value” (95). If that’s the case, we still don’t have an argument for Piaget thinking that the participation in game rules shapes or otherwise facilitates moral development. This is a much stronger thesis that would have significant psychological import. It would hold that games are more than epistemological tools for psychologists; they are mechanisms of moral development.

Piaget did seem to hold the converse view, that moral rule consciousness influences game rule consciousness. He writes, “the origins of consciousness of rules even in

so restricted a field as the game of marbles are conditioned by the child's moral life as a whole" (45; cited in Flanagan 1991, 168). This again points to his claim that children assimilate game rule consciousness to moral rule consciousness. But does moral rule consciousness assimilate to game rule consciousness? If Piaget did hold this, he makes no mention of it in *The Moral Judgment of the Child*, and some of his later views seem to weigh against it.

In *Play, Dreams, Imitation in Childhood* (1951), he claims that pretend play is egocentrism in its purest form. It is the assimilation of reality to the ego such that the world becomes a mere reflection of the self. He's quite clear that make-believe is not a form of training or as Groos (1896) puts it "pre-exercise".

Far from being preparatory exercises, most of the games we have given as examples either reproduce what has struck the child, evoke what has pleased him or enable him to be more fully part of his environment...Even games with dolls, which might lend themselves to a special interpretation are much less pre-exercise of the maternal instinct than an infinitely varied symbolic system which provides the child with all the means of assimilation it needs in order to rethink past experiences. (154)

Play then is not explained by its capacity to train one or to change one's psychology. It is the manifestation of the child's psychology, specifically their desire to relive. "[P]lay essentially derives from the child's mental structure" (160) not the other way around.

Piaget claims that games with rules (e.g. marbles) have essentially the same explanation. It is the egocentric sculpting of reality to fit one's desires. However, this

process is constrained by the social nature of rule-based games<sup>5</sup>. Since there are multiple players there needs to be some objectivity, some set of mutually observed rules for the activity to be possible. The goal of the game is still an outgrowth of one's subjectivity, while the rules are a by-product necessary for orderly cooperation and methods of conflict resolution. We cannot rule out the possibility that Piaget saw this byproduct as shaping moral development, but he makes no indication that it does. At the very least, we can say that the shaping of moral development does not *explain* the existence or structure of games with rules.

Let us sum up the interpretive conclusions made thus far. There is scant evidence to suggest that Piaget thought that the transformations in game rule consciousness plays a causal role in shaping moral rule consciousness. Nevertheless, there is a strong analogy between them. They have similar functions, similar structures, and are the result of similar sets of environmental data. For this reason, the study of children's attitudes toward game rules sheds light on the arc of moral development, in particular, the shift from heteronomy to autonomy. The strength of this claim may be related to the extent to which children assimilate game rules to moral rules, but primarily it rests on the strength of the analogy between games and morality.

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<sup>5</sup> See the following quote: "In games with rules there is a subtle equilibrium between assimilation to the ego—the principle of all play—and...the demands of social reciprocity" (Piaget 1951, 168)

## *Challenges to the Analogy*

Owen Flanagan (1991) highlights a number of shortcomings of the analogy between marbles and morality. He notes that the rules of marbles are both conventional and parochial. It is a matter of convention as to which particular set of rules are binding, and they only bind those particular players, not players generally. In contrast, morality is often thought, by children and adults, to be objective and universally binding. Moral rules are fixed, beyond the influence of mere conventions, and they are not optional, but rather apply to everyone at all times. Moreover, agreement on the rules of the game is a precondition of playing marbles. No such moral agreement is ever formed, and further, in the case of morality it seems false to say that everyone is engaged in a singular pursuit or is “playing the same game” (171).

Another challenge to the analogy comes from social-cognitive domain theorists such as Elliot Turiel and Judith Smetana. Research suggests that children, even very young children, make distinctions between moral and conventional norm violations (e.g. Turiel 1983, Smetana and Braeges 1990, Smetana 2006). Moral violations, defined as transgressions to the rights or welfare of others, are robustly judged to have a certain set of characteristics. They are viewed as authority independent, universally binding, contextually insensitive and serious in nature. In contrast, conventional norms, ones that arbitrarily structure social interactions, are seen as being authority dependent, locally binding, contextually sensitive, and less serious in nature. These results have



been seen as devastating to Piaget's theory of moral development. They show that even very young children, age three and four, do not have a heterogeneous orientation to rules generally, even if those rules are laid down by an authority. It also casts doubt on the claim that there is a strong analogy between games and morality. Games are clearly conventional, and if conventional and moral rules constitute fundamentally different cognitive domains, then games have very little to tell us about moral development.

Kelly et al. (2007) have recently challenged these results by finding harmful actions (e.g. spanking) that are judged to be authority dependent and non-generalizable, and non-harmful, conventional actions (e.g. ritual cannibalism of the deceased) that are judged to have the moral-type characteristics. While these results merit further investigation, it suggests that the moral-conventional dichotomy is far from absolute. We may also wonder if the differences between moral and conventional transgressions have been overstated. As mentioned before, conventional rules are judged to be authority dependent, non-generalizable, contextually sensitive, and less serious. The first three attributes can be reduced to one, since authority dependence and non-generalizability are really just specific forms of contextual sensitivity. What is more, moral rules *are* contextually sensitive, they just have fewer conditions under which they do not apply. *Don't hit others* is a moral rule, yet there are plenty of instances that it doesn't apply, for instance, when you are getting mugged, or you are in a boxing ring, or you are befriending a masochist. Unless you are Kant, moral rules have exceptions,

you just need to look hard enough. That leaves us with the claim that moral transgressions are more serious than conventional transgressions. Again the difference here is a matter of degree. Giving someone a pinch, telling a white lie, breaking a trivial promise, these all may be morally wrong, but we need not consider them more serious than driving on the wrong side of the road or micturating upon a gravesite. It may be true that most moral transgressions are judged to be more serious than conventional transgressions, but there is a considerable amount of overlap. All of this is not to say that cognitive domain research program is not damaging to Piaget's theory. It is. Children do not take all rules laid down by authorities to be universal divine commandments. At the same time, we cannot dismiss the notion that game rules are similar to moral rules or that the developments in one set of rules affects or reflects developments in the other.

### *Animal Play and the Evolution of Morality*

While some have been critical about the analogy between games and morality, biologist Marc Bekoff and philosopher Colin Allen argue that the relation is in fact more than an analogy, that rule-based games may even be an evolutionary “foundation” of morality (Bekoff 2001, Allen and Bekoff 2005). They base their claims on observations of canid social play which appears to have sets of norms that relate to protomoral norms like fairness. Social play, like morality, is a cooperative enterprise. It requires that all parties know that it is merely play and not some more serious activity like fighting. Play

markers are often used to signal this intention. For instance, the play bow in canids is frequently used to initiate a play session. It signals that the bites and chest bumps to follow are all in good fun. What is more, play signals are almost always “honest signals”; they are not used to deceive. A dog that play bows will almost always be non-aggressive. This in part owes to the cooperative nature of play. If an individual issues a play signal and then acts aggressively, that individual is less likely to be selected as a cooperative partner next time around.

Part of the reason that play is considered cooperative is that the players don't take full advantage of their opponents. Self-handicapping is a widespread phenomenon in play. As discussed in chapter 2, It refers to when an individual lets up on its opponent and does not pursue “winning” as vigorously as possible. Role-reversing is another prevalent phenomenon and is often a form of self-handicapping. It typically occurs when an animal in a dominant position switches to a defensive position. For example, a larger coyote might voluntarily go to the ground and lie belly up to give the weaker coyote a chance to be in the dominant position.

Bekoff and Allen view play signaling, self-handicapping, and role-reversing as evidence that there are rules governing fair play in animals. Animals expect obedience to the rules and may terminate play or act with aggression when they are not followed. Through play individuals learn rules about acceptable behavior, “codes of social conduct that regulate what is permissible and what is not permissible” (Bekoff 2001, 85).

The maintenance of these norms and of cooperative play requires a sense of fairness and trust, without which play (and morality) breakdown.

One difficulty in interpreting play conventions as norms of fairness is that it's not clear what there is to gain by playing unfairly. For instance, there is no tangible benefit to a coyote giving a play bow and then acting aggressively, say, biting with intent to injure. If an individual refuses to self-handicap or role-reverse, it will undoubtedly be at an advantage with respect to winning the play fight, but what good does winning do for the animal? If there's no good to be gained by breaking rules, then in what sense are they being unfair? They are merely acting against their own self-interest because they will lose a play partner.

Bekoff and Allen do not address this problem, but there are responses that can be made on their behalf. First, there may be psychological benefits to winning. Individuals may feel a sense of dominance which is pleasurable and may be accompanied by hormonal changes. Supportive evidence can be found in Pellis and Pellis (2009) who found that in rats play bites to the nape are rewarding. They argue that this may be due to similar behaviors that occur during mating. Second, there may be an increase in social stature as a result of winning. Winning animals may move up in the dominance hierarchy. A third way "cheating" may be beneficial is if animals benefit more by practicing dominant tactics. Canids are predatory and it is reasonable to think that dominant positions help reinforce attacking strategies. In contrast, there may be limited

utility in practicing defensive postures. Lastly, cheating animals may benefit by injuring a competing member of the social group. Injury may impair their ability to vie for resources and mates.

The claims Bekoff and Allen make about the relationship between play and morality are both modest and vague. They claim that the social play norms might “speak to” or “have something to say about” the evolution of morality (Allen and Bekoff 2005, 130; Bekoff 2001, 85). Their main conclusion seems to be that the relationship warrants further investigation. They do however indicate one way in which play could contribute to moral development. “Individuals might...generalize the implicit rules of interaction (“codes of conduct”) learned in playing with specific individuals to other group members and to other situations such as food sharing, defending resources, grooming, and giving care” (Allen and Bekoff 2005, 130). In this way, social play may provide a developmental “foundation of fairness” on which future cooperative and protomoral interactions rely. The claim then is that play is *ontogenetically* prior to protomorality and that it is a learning tool that facilitates protomoral function in the adult. While this is interesting, it still does not tell us much about the evolution of morality, which is what they claimed to be doing. For this we need some additional claim. One possibility is that social play is *phylogenetically* prior to protomorality, in such a way that the emergence of morality depended on the prior existence of social play. It could be that the cognitive mechanisms evolved for social play were co-opted

by selective pressure for protomorality. Thus, the “foundation of fairness” that play provides could be both developmental and evolutionary. Another possibility is that play, in virtue of its function of social-cognitive learning, enabled protomorality to become more complex than it otherwise could. Acquiring protomoral competency is a cognitively demanding task, which places an increased demand on learning. Play provides more and safer opportunities to do this learning. It could have provided the enriched learning environment necessary for the evolution of more sophisticated forms of protomorality leading up to human morality.

In light of the arguments in Chapter 1, this last suggestion seems the most promising. The claim that play norms were co-opted by selective pressure for protomorality is less likely, because the evidence weighs against the view that there is a play capacity or system. If anything, it looks like play co-opted other cognitive mechanisms not the converse. However, we cannot be too enthusiastic about these conclusions since dog play is precisely the type of play that the independent motivations thesis (2a) has trouble explaining. Dog play is both complex and stereotyped and would be the kind of play that has its own capacity if any kind of play did. My own speculation is that the capacity for normativity arose out of selective pressure for protomorality, and then this normative capacity was co-opted by play, at which point the normative capacity became responsive to pressure on both protomorality and play. Without significant evidence to back this claim up, it will have to remain speculation.

## *The Primacy of Peer Interaction*

Piaget claims that heteronomy is an unstable cognitive equilibrium. For this reason, heteronomous organizations shift to more stable, autonomous ones. Here we get a glimpse of Piaget's teleology. Structures tend to go from unstable configurations to stable ones, from less adequate to more adequate. For example, young children judge that objects do not conserve quantity after undergoing a shape change. Piaget claims that this has the mark of egocentrism, a failure to distinguish between one's subjective impressions and objective reality. The child infers from a diminished appearance to a diminished quantity. A more stable equilibrium is achieved by the time the child judges that quantity is conserved. Egocentrism has waned and the child has learned to mentally reverse shape transformations. This provides us with a clear case of what makes for a more stable equilibrium: one's judgments are now in accord with objective reality, at least insofar as everyday experience is concerned.

The same may not be said of the progression from heteronomy to autonomy. Moral truths, if there are any, cannot be verified in the way that physical truths can. One can measure whether a lump of clay has the same volume after a shape change, but one cannot measure whether equality (i.e. uniformity of outcome) or equity (i.e. outcome according to desert) is the right conception of distributive justice. Most everyone's beliefs will eventually shift from equality to equity, but there are no simple observations that show equity to be objectively superior and equality to be objectively

inferior. Piaget was mindful of this difficulty. He was faced with the observation that cognitive structures equilibrated in approximation of *a priori* principles (e.g. equity, autonomy) but nonetheless rejected the idea that such principles were verified or reinforced by *a priori* reasoning. He writes:

“From the psychological point of view, which is that of what is, not what should be, an *a priori* norm has no existence except as a form of equilibrium. It constitutes the ideal equilibrium towards which the phenomena tend, and the whole question is still to know why, the facts being what they are, their form of equilibrium is such and no other.” (316-317)

One way of construing the question is this: What is it about the environment that makes cognitive structures tend toward and ultimately stabilize in forms like autonomy and equity rather than forms like heteronomy and equality? Piaget's answer lies with the dynamics of peer interaction. This is the mode of interaction in which children are freed from the vastly unequal interactions that they have with adults. They begin to take the perspective of others, engage in true reciprocity, and thereby come to see moral rules as binding in virtue of their making possible cooperative endeavors. They are imbued with a sense of mutual respect, which gives moral rules their autonomous normative force. The most important form of peer interaction, according to Piaget, is socio-cognitive conflict. Facing differences in beliefs, skills, and perspectives causes children to reflect on and potentially revise their own views. It causes perturbations that disequilibrate cognitive structures and force them to restructure in the form of more adequate equilibria.



The importance of peer interaction has been empirically reaffirmed since Piaget wrote *The Moral Judgment of the Child*. To test this theory, a number of studies have been conducted in which pairs of individuals were asked to discuss a series of moral dilemmas. Kohlbergian moral judgment tests assessed their moral reasoning skills before and after the moral discussion. The general finding is that peer discussion improves moral reasoning skills. The largest effect is seen when individuals are paired with someone one third of a stage above themselves (Berkowitz et al. 1980, Berkowitz and Gibbs 1983). “Transactive” discussion appears to be a crucial factor in producing positive effects on moral judgment (Berkowitz and Gibbs 1983). It is defined by Kruger and Tomasello (1986) as “[discussion] in which an individual uses reasoning that operates on the reasoning of the partner or that significantly clarifies his or her own ideas” (681). They continue, “For example, an individual transacts when he or she extends, paraphrases, refines, completes, or critiques the partners reasoning” (681). Transacts occur when there is a direct interchange of ideas. They appear to be particularly beneficial to moral reasoning skills when an individual's view comes to be rejected (Kruger 1993). Consistent with Piaget's theory, transacts were found to be significantly more common among child-child interactions compared to child-adult interactions (Kruger and Tomasello 1986). Moreover, Keasy (1971) found that social participation was positively correlated with moral development stage, providing further evidence that peer-interaction promotes and reinforces moral judgment skills.

The importance of peer interaction brings play back into the fold. We left the earlier discussion with a skeptical view of what play contributes to moral development. Games were thought by Piaget to be a window into the evolution of moral rule consciousness but little more. Moreover, the strength of this modest claim rests on an analogy between game rules and moral rules which has sustained significant criticisms. However, play is a common, if not the most common, context for peer interaction and socio-cognitive conflict among young children. (Pelligrini 2009, p. 58)

For example, even if a child plays individually, she may share a play space with others, which in and of itself can lead to conflict. In shared-environments, there are a finite number of toys, and since children have overlapping toy preferences, there inevitably arise disputes over temporary ownership. Turiel and Killen (1991) found that when classrooms were divided into small play groups, issues of toy sharing accounted for 76% of all disputes, and during free-play for the whole class, one third of all disputes. What is surprising in these toy disputes is both the complexity and efficacy of verbal negotiations. Nearly a quarter of all object disputes were settled by negotiation between the children alone. This was the highest rate for any of the types of conflict observed.

The appeals that children made in negotiation are not unlike the appeals an adult might make. The authors found that children often justify their request for a toy by citing their desire to complete a personal project, saying for example, "I want [this

toy] because I am making a house and I need that block for my door” (Killen and Nucci 1999, 59). Other times children would appeal to fairness or their right to an object. “I want it because you have three cars, and I have none” (64). “I want it because you have already had a turn with it, and I haven’t had a chance to use it yet” (59). These appeals to fairness are not idle; they appear to resonate with the other children. There is a mutual understanding about what constitutes a legitimate claim. For instance, one study showed that length of time spent with a toy significantly increased the chance of the toy being kept after a dispute (Bronson 1981).

These toy negotiations are just one example of how play can lead to the socio-cognitive conflict that has been implicated in the development of moral judgment skills. Children get practice making normative claims and weighing these claims against the claims of another. It’s an early example of children navigating issues of distributive justice for themselves, without the guidance or authority of adults.

While Piaget saw peer interaction as central to the development of autonomy, the effects can be seen to be even broader. This is because, as Flanagan (1991) notes, Piaget’s claims were limited in two crucial ways. First, Piaget defined morality as consisting of a set of rules governing interpersonal conflict. This is an overly narrow conception. It crowds out a great many aspects of moral life like caring relationships, intrapersonal development, and moral ideals. A second limitation to Piaget’s claims is that they are restricted to moral judgment. This excludes any of the influence of peer

interaction on the development of moral motivation, behavior, and virtues. Removing these limitations opens the door for investigating ways that play can illuminate and influence moral development.

### *In Search of Equilibria*

We've still left a question unanswered. Piaget claims that peer interaction is the key environmental feature that leads to more "adequate" or normatively justifiable moral equilibria. But what is the underlying teleological principle that determines the direction of adaptation. To use metaphorical language, what are cognitive structures *striving* toward? Piaget's project of genetic epistemology is concerned with the development of knowledge in different domains, for example, mathematics, physics, and logic. It might be too strong to say that knowledge for Piaget requires that one have a true belief, but truth seems to be the explanation for what makes for an adequate structure. This is straightforward for mathematics and logic, less so for physics. Physics is difficult because we never come into contact with truth itself. Still, we can say that structures are adequate insofar as they approximate the truth with respect to the relevant environmental data. Structures that underlie the judgment that quantity is conserved through shape changes are adequate because, for all practical purposes, it is true that quantity is conserved. The moral data do not have this relation to truth since they primarily consist of perceptions of behaviors, inferences about others cognitive and emotional states,

and one's own cognitive and emotional states. There is no clear relationship between these data and moral truth itself<sup>6</sup>.

I propose that the notion of moral truth as a teleological principle should be replaced with *success*. Our moral cognitive structures and behavioral dispositions change or adapt or evolve, in part, to produce successful interactions with others. What are successful interactions? We can tie it to a number of desires that we as humans have. For instance we desire to be liked, to be admired, to achieve, and to have fun. Interactions that produce these qualities will be deemed to be successful, and features of our moral personality that further these ends will be reinforced. Thus, to see how play shapes our moral development, we need to look at the conditions for success. These will vary according to the type of play being engaged. With this in mind, we can start to taxonomize play and look at how the different species of play differentially reinforce aspects of our moral psychology.

### *Species of Human Play*

Our goal is to distinguish types of play so as to bring out the differences in values, virtues, and cognition that they reinforce<sup>7</sup>. To start let us divide play along the dimen-

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6 Flanagan (1982, 508) makes a similar observation, arguing that there are difficulties in grounding adequacy in moral stages by way of the “moral world”. While adequacy of physical judgments can be cashed out in terms of coherence with the physical world, the “moral world” cannot be identified in any non-circular way.

7 Later in the chapter, pretend play will be discussed so it will not be included in the taxonomy here.

sions of cooperation, competition, and individualism<sup>8</sup>. Each of these dimensions can be applied to both the means of the activity and the goals of the activity (Orlick et al. 1978). For instance, football can be thought of as having cooperative means and a competitive goal. The goal is attained through cooperative means, a joint effort by the team-members, while the goal itself, to beat the other team, is competitive. Unfortunately, many forms of play will admit of ambiguity. Football, to stay with the example, can be thought of as having cooperative means *and* competitive means. While the team members do cooperate by coordinating their actions, they also compete in individual matchups on the field. We will have to live with these imperfections for now.

While individualist forms of play may have some effects on moral development, I will leave these matters to the prior discussion of toy negotiations and the later discussion of pretend play. In this section, I will focus on three types of play: play with cooperative means and cooperative ends, competitive means and competitive ends, and cooperative means and competitive ends. For each type, we will identify paradigmatic examples, the regulative structure, the socio-cognitive skills involved, and the sociomoral values and virtues reinforced.

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<sup>8</sup> This demarcation has precedence in the education literature (Johnson and Johnson 1974, Orlick, McNally, and O'Hara 1978).

## COOPERATIVE MEANS—COOPERATIVE GOALS

Paradigmatic examples of this type of play might include playing house or jumping rope double Dutch. These games typically do not have complicated rule structures. House, for example, does not have any explicit rules at all, except maybe the requirement that everyone pretend. Instead, these games tend to have heuristics about how to play the game (Flanagan 1991). When jumping rope, one needs to be mindful of one's partners. In house, the baby must be fed when it is hungry. These rules are not codified in the way that the rules of marbles are; nevertheless, failure to follow these heuristics may result in normative protest by the other players or even termination of the game. In this way, the heuristics may be normative even if there are no explicit rules.

Play with cooperative means and cooperative goals rarely involve winning or losing. Groups may attempt build the biggest sandcastle or jump the most rope, but there are no inherent conditions of victory. Further on the spectrum is a game (or more precisely a play activity) like house, which has no predetermined endpoint. There are a variety of goals that one could have while playing, most of them centering on the maintenance of a good household.

Cooperative games with cooperative goals, not surprisingly, reinforce the values and skills associated with cooperation. Working together in a coordinated fashion is paramount. To be successful at this type of play, one needs to be able to monitor and understand what others are doing in addition to understanding that others are doing

the same. Michael Tomasello (2009) refers to this as “joint attentional focus”. Attention is distributed to what each of the participants are doing, not just to what one is doing. Successful collaboration requires that one take a “bird's eye view” of the activity. Tomasello also argues that in such collaborative activities there is “shared intentionality”. It is a sense that *we* are doing an activity, not merely *I*. Shared intentionality goes hand in hand with forming a joint-goal towards which each of the collaborators are striving. Importantly, Tomasello finds that our closest evolutionary neighbor, chimpanzees, do not form joint goals, have shared intentionality in activities, or exercise joint attentional focus. This is one of the reasons he thinks these skills are integral to the development of humans' unique capacity for morality.

Cooperative-cooperative play exercises and reinforces the capacity for joint attentional focus and shared intentionality, but there are other cognitive dimensions to the play as well. For instance, one needs to be able to pick up on the heuristics of the game often without instruction. This is a similar skill in regard to moral heuristics. To be successful at this type of play one must also be a skilled negotiator. Success sometimes involves getting what one wants. This could be getting to be the mommy rather than the baby in a game of house, or getting a moat installed around a sandcastle. Each of these requires a consensus among participants, so negotiation and reasoning skills allow one to get the consensus to accord with one's individual desires. Similar processes take place in moral dealings. If a group faces a moral dilemma, a skilled negotiator will



be better apt to get consensus swayed in her direction. A morally virtuous person would be someone who both knows what is right and can persuade others of what is right. Negotiation isn't always about getting things your way. Often its about finding the best solution to a problem of cooperation. It is about managing the wishes of individuals in light of what is best for the group.

In terms of values, cooperative-cooperative play reinforces fairness, shared enjoyment, tolerance and solidarity. The group dynamic breaks down when individuals feel that they are being treated unfairly (e.g. they don't get their turn playing a certain role). One needs to be tolerant of the views and desires of others in order to maintain group harmony, and this harmony manifests itself as solidarity among peers, an attachment which only becomes stronger when joint-goals are achieved through cooperation. In many cooperative games it helps to be caring and sympathetic. One needs to be responsive to the needs of the others in order to maintain a sense of cohesion. It is best for all when each of the players feels a part of the group and enjoyment is shared by all.

#### COMPETITIVE MEANS–COMPETITIVE GOALS.

Examples of this type of game include: tag, marbles, the card game war, and singles tennis. Winning and losing are often the goals of the competitive games. Even tag, which doesn't have a final outcome, might be considered to have one loser and many winners

at any given time. There tend to be more rules in this play compared to cooperative-cooperative games, and the rules are often explicit. They define the games and provide strict guidelines for acceptable play. There may be heuristics in these games as well, though they are less likely to be normative as they might be in, say, house. The heuristics may be about how to play the games *well*, but it is actually in the interest of the other players that one not follow these. On the other hand, there are also heuristics about sportsmanship which are normative. In order to have long-term success at these games, sportsmanship is a must. Nobody wants to play with sore losers, gloating winners, or cheaters.

Those most successful at this type of play win and win fairly. Achievement and skill are rewarded. Winners are respected and admired. They form the ideals to which the others strive. Shared enjoyment is less important to these games than it is with cooperative-cooperative games. One can't expect that any game with a loser is enjoyed by all. Competition and achievement seem to supplant shared enjoyment, tolerance, and solidarity as the primary values of this type of play. The prospect of winning fosters an air of self-interest rather than group-interest. Many of the rules in competitive games amount to constraints on self-interest, and are often created to uphold the value of fairness in competition. Players are subject to the same rules, so whoever wins has won fairly and deserves to win. Notice how this is different from the fairness that might be observed in cooperative games. In house, it might be fair for children to get to

take turns playing the role that they prefer. Fairness depends on each person receiving a share of what they want. In competitive games, fairness is about imposing equal impediments so that players merit their statuses as winners or losers. If you are unskilled at a game, it is still unfair for you to break the rules even if it gives you a more equal chance of winning. In political terms, competitive fairness is closer to equality of opportunity than equality of outcome.

Cheating is a violation of fairness made possible by codified rules and the structure of winning. One cannot cheat in a cooperative game like house because there are no codified rules and there is no advantage to be gained. In competitive games, cheating enables one to pursue self-interest beyond what is allowed. Cheating may lead to success, so in this way it may be seen as an impediment to moral development. However, cheaters can also be caught and when they are they may be punished from within the game (e.g. a loss of points) or without (e.g. prohibited from playing again). Children learn what its like cheating and getting caught in an environment where the consequences are not dire. Perhaps more importantly, they also learn what it is like to have their own rules violated. Previously, they may have only had experience violating their parents unilateral authority, but in competitive play they get a chance to see the other side, which may lead to a new found respect for rules.

## COOPERATIVE MEANS—COMPETITIVE GOALS

This category mainly refers to games in which there are teams competing against one another. Football, basketball, doubles tennis are all examples. Winning is the predominant competitive goal here, as with competitive-competitive play, and teamwork is the cooperative means. However, as illustrated with football before, there may be competitive means in these games as well, since players compete against players of the other team.

The structure and values are mostly carried over from competitive-competitive play. These games tend to have complicated rules that uphold fairness and make winning and losing meritocratic. However, they consist of constraints on team-, rather than self-, interest. The introduction of teams adds cooperative values to the mix, values that don't have perfect complements in cooperative-cooperative games. Loyalty for instance is a value that takes on a central role in teammate interactions. Effort too is valued along with skill. When we think of the ideal teammate, we think of someone who is loyal to the team, provides maximum effort, and is skilled at what they do. They contribute most to the joint-goal and are respected and admired for doing so. Teamwork is a primary value in this play. The same may be said in cooperative games, though the nature of teamwork is different. Competitive teamwork is more about domination than collaboration.

## MORAL FOUNDATIONS THEORY

Having finished this preliminary discussion of three types of play, we might examine how it relates to a prominent theory in psychology, Jonathan Haidt's theory of moral foundations (Haidt 2013, Graham et al. 2009, Graham et al. 2011, Graham et al. 2013). Haidt proposes that human moral psychology can be analyzed in terms of six dimensions: care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, sanctity/degradation, and liberty/oppression. Each of these dimensions corresponds to a modular emotional mechanism that gives rise to moral intuitions. These "moral foundations" are innate and biological in origin, though they may be diminished or amplified depending on upbringing.

As we have discussed, group games esteem different values. Cooperative-cooperative games depend on care and harm. One must care for the other players to maintain their satisfaction with the game. Harm has negative consequences not just for the individual but for the group as a whole. Competitive games are considerably less sensitive to care and harm. In fact, there are forms of harm that are permitted in competitive games that are not permitted in everyday life. (Consider the brutality permitted in a sport like football.) To be successful, it may pay not to be caring, to see your opponent as a mere obstacle. Both cooperative games and competitive games value fairness, though, as mentioned, they do this in different ways. Cooperative-competitive games depend on loyalty among teammates.

We should expect then that playing these types of games reinforce different foundations. A child who plays cooperative-cooperative games may become more sensitive to the concerns of care than others. A child who plays competitive team games may become more sensitive to loyalty and the in-group-out-group distinction. It's also possible that a child's preference for a particular type of play may *reflect* the relative weighting of their moral foundations<sup>9</sup>. A child who is already more sensitive to care and harm may gravitate to cooperative games, whereas a child who is less sensitive may find such games uninteresting. If there is both self-selection and reinforcement, then play may have the effect of polarizing moral orientations of children.

### *Pretend Play and Moral Development*

Pretend play begins to appear around the age of two. Early forms of pretend play often involve a child pretending that an object is something entirely different. A stone could be a car, or a cardboard box a house. This requires a capacity for symbolic representation, which may explain why the onset of pretend play coincides with that of language (Konner 2011). There's some mystery as to why children spend so much time in pretend play. Such investment suggests an important evolutionary function<sup>10</sup>.

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<sup>9</sup> Flanagan (1991) notes this dual nature of play in his discussion of games and gender, saying, “No matter how we explain the sex differences in play, the fact remains that whatever differences there are undoubtedly both reflect and reinforce certain ways of being in the child” (173-4).

<sup>10</sup> Not all agree on this point. Lillard et al. (2012) that pretend play may be best interpreted as an epiphenomenon. (For replies to this claim, see Walker and Gopnik, 2013; and Weisberg and Hirsh-Pasek 2013)

As briefly discussed in the second chapter, Alison Gopnik (2009, and Walker and Gopnik, 2013) argues that pretend play is a way for children to practice evaluating counterfactuals. They can imagine how the world might be and how it would react to different actions and events, which in turn prepares them actual situations. Moreover, pretend play helps children build what Gopnik calls “causal maps” of the world. Children categorize causes, learn about what causes what, and construct a physical model of their environment.

Gopnik claims that our understanding of causation cannot be reduced to statistical regularities. There is a perfect correlation between the noise of a bat hitting a baseball and the baseball accelerating through the air, but we do not judge that the noise caused the ball to move because there is no counterfactual dependence between the two events. If there were no sound the ball would still be sent flying. However, if the bat did not contact the ball it would not get sent flying, so we judge that the bat, and not the noise, cause the ball to move. Gopnik claims that this type of counterfactual reasoning is required for to making proper causal inferences and that pretend play is a tool that children use to reinforce these counterfactual reasoning skills and to help them flesh out their causal maps.

Buchsbaum et al. (2012) have provided some preliminary empirical support to the hypothesis that pretend play and causal counterfactual reasoning are linked. In the experiment, they told children aged 3-4 that they had a “birthday machine” that would

sing when a “zando” was placed on top of it but would not sing when a non-zando was placed on top. After the children were taught the causal characteristics of the birthday machine, they were asked counterfactual questions like: “If this one were not a zando, what would happen when we put it on top of the machine?” Next, the birthday machine, zando, and non-zando were removed and three new objects were brought into the room. They were invited to pretend that one was a birthday machine, another was a zando, and another was a non-zando. Finally, experimenters asked the children what they should pretend to make the pretend birthday machine sing. Children who answered the counterfactual questions correctly were significantly more likely to use the pretend zando to make the pretend birthday machine sing, an effect that remained significant after controlling for cognitive development, age, and executive function. The authors argue that this is initial evidence supporting the claim that pretend play is linked to and reinforces counterfactual cognition.

Just as children learn about the physical world by constructing causal maps, children learn about the social world by constructing causal maps of the mind. They start to become sensitive to the mental states of other people and learn how they are causally related to the world. They learn that anger causes aggressive behavior or that acts of kindness causes happiness in others. A study on psycho-causal reasoning showed that 18-month-olds, but not 14-month-olds, are able to predict the reactions of experimenter to food options when the experimenter has radically different prefer-



ences in food (see Gopnik 2009). As the infant watched, the experimenter ate a cracker and a piece of broccoli, reacting with disgust at crackers and delight at the broccoli. Even though the babies greatly preferred the crackers themselves, they gave the experimenter broccoli when they asked for some food. This shows that the infants understood that the broccoli would cause happiness in the experimenter and that the crackers would not, even though the opposite was true for themselves.

One way that the building of psycho-causal maps is relevant to moral philosophy is by way of responsiveness. Lawrence Blum (1987) defines “responsiveness” as the recognition of another’s (potential) mental state, combined with an altruistic motivation and a belief that one’s action will improve that (potential) mental state. He gives the following example:

Sarah, twelve months, is sitting with Clara, fifteen months, on Clara’s mother’s lap. The girls have grown up together and are very close. Clara is holding a plastic cup which she drops on the floor, cries, and points to. Sarah climbs out of Clara’s mother’s lap, gets the cup, and gives it to Clara. (309)

Here Sarah is responsive to Clara’s needs; she recognizes her discomfort, is motivated to relieve that discomfort, and believes that her action will achieve this goal. In order to form the belief that retrieving the cup will soothe Clara, Sarah needs to have a causal theory about Clara’s mental state. She must judge that her dropping the cup caused her to be upset and that the retrieval of the cup will cause her to be content once more. Both causal inferences plausibly involve counterfactual reasoning. Sarah may reason

that if the cup had not fallen Clara would not be crying and that if Clara were brought the cup she would not be crying. Or consider another one of Blum's examples:

Ben, three-and-a-half, is playing on the floor with his sister Sarah, six months. Ben sees a safety pin and takes it to his mother in another room, saying that it would hurt Sarah if she got it.

In this scenario, Ben is responsive to a *potential* mental state of his sister. Counterfactual and psycho-causal reasoning appear to enable this response. He thinks about what *would* happen if Sarah found the pin, and relying on the psycho-causal map he has of his sister, he infers that she would stick her self, which would cause pain. This is not unlike Ben *pretending* that his sister found the pin and drawing out the implications of this pretense.

Blum argues that responsiveness is not captured by Kantian and Kantian based ethical theories, like that of Kohlberg, because responsiveness need not invoke any moral rules. He writes,

“There is no necessary implication that a child who is responsive to another necessarily thinks of helping the other as conformity to a standard of right and wrong, or good or bad, nor that she sees herself as behaving in conformity with a standard of behavior which defines what it is to be a good person” (319)

Nevertheless, Blum does think that responsiveness is a “moral phenomenon” because of the role it plays in development. “I suggest that responsiveness in children is one developmental forerunner of the adult moral virtues of compassion, kindness, helpfulness, sympathy, and the like” (Blum 1987, 319). Responsiveness requires a sense of

altruism and a concern for others and, Blum would argue, must be considered an important aspect of moral development. Given the importance of counterfactual reasoning and psycho-causal maps to responsiveness, we see that pretend play has a role to play in this development as well.

Pretending is a way for children to inhabit and interact with other minds. They can simulate the goals, wishes, and beliefs of others and then think about how these will affect future social interactions. This is particularly evident in children's dealings with imaginary friends. Imaginary friends are quite common among children and are a normal part of development. Marjorie Taylor (1999) found that 63% of young children had imaginary companions, though not all of them were of the friendly variety. Not all of them were people either. Children will often have persistent and vivid imaginings of creatures and animals. Gender seems to influence the nature of these imaginings, with girls being more likely to invent people or creatures to be companions and boys being more likely to assume the identity of their creations (Carlson and Taylor 2005). Boys tend to create large, powerful creatures, whereas girls tend to imagine small, weak creatures that require care (Gopnik 2009).

Pretend play is not limited to imaginary friends. As children get older, they are more likely to invent "paracosms" (Gopnik 2009). In contrast to imaginary companions, paracosms are truly imaginary worlds. They consist of a community of people or

creatures and an environment for them to interact. Paracosms represent a richer social environment for children to evaluate counterfactuals.

Older children are also more likely to inhabit imaginary personae, referred to in the literature as “impersonation” (Carlson and Taylor 2005). This lends itself better to group play than imaginary friends. A group of children can, for example, impersonate the different members of a family during a game of house. This serves a variety of purposes. Children get practice at perspective taking, simulating the thoughts of other minds. They learn about the people and roles they are assuming, and by interacting with other children doing the same, the effect is that of pooling their knowledge about social roles. It gives them new data on how different types of people might act in social situations, data that wouldn't be apparent through mere reflection.

The imagined social situations are often moral in nature. We might consider pretend play akin to enacting moral thought experiments. The only difference is children, as opposed to philosophers, sometimes investigate moral scenarios that have relevance to real life. They think about practical, everyday moral considerations of husbands, wives, mothers, and children (in addition to those of dragons, fairies, warlocks and superheroes). This undoubtedly prepares them for the many different moral situations that they have not yet encountered. We should expect then that children who engage in pretend play would possess greater social intelligence and moral acumen. This is in line with the findings of Arbutnot (1975) who tested the effect of role

playing on moral judgment. Subjects who actively played out parts in moral dilemmas, and were paired with an individual of a higher Kohlbergian moral reasoning stage, showed significant improvement in their own moral reasoning skills. This effect was not found for subjects who watched but did not take part in the role playing and ones who were paired with individuals of equal or lesser moral reasoning skills.

### *Shaping Play and Development*

Because different forms of play can be beneficial or deleterious to moral development, and because, all things being equal, it is morally good for us to raise the morally better people, it follows that our actions which shape children's play are morally significant.

The first question that arises is what types of play should we try to make more or less frequent. Drawing on Piaget's views, one could argue that we should promote play that involves interactions between peers and socio-cognitive conflict. From Bekoff and Allen, one could argue that we should promote play that involves norms of fairness, and from Gopnik, we might promote pretend play that reinforces counterfactual reasoning and perspective taking.

More contentiously, one might argue that we should promote cooperative-cooperative play because it instills a preferable set of values. It reinforces collaboration and fairness, while avoiding the some of the potentially negative effects of competitive forms of play, for example, the sharpening of the in-group-out-group distinction or the

desensitization to harm. If play only had the impact of reinforcing values, ideals and skills, then we would be tempted to steer the balance toward cooperative-cooperative games. However, there is a tension between an activity's reinforcing certain qualities, and an activity's providing an outlet for certain motivations. I can imagine the struggles of having to raise a testosterone fueled adolescent with no competitive outlets and who is only permitted to play "feel-good" cooperative games. If we are to take seriously the notion that motivations accumulate and release, as Lorenz and Leyhausen suggest we do, then playing competitive games may help certain children avoid having their aggression spill over into less safe areas.

The trick then is to provide an outlet for such feelings in the safest way possible, where safety is relative to physical, psychological, and moral well-being. The previous sections about the values and virtues reinforced by play were not idle chatter. Play cultures can have some of the strongest influences on a developing mind. But as comforting as it might be to have a formal analysis of competitive and cooperative play, to fully understand how a child is being influenced by a play culture one must look to the actual attitudes and ideals put forth by a given group of youths. As great as the differences between two types of play are, you can undoubtedly find greater differences between two instances of the same type of play.

We also must recognize that just because play is formally cooperative does not mean that it is reinforcing good values. I did not play house much as a kid, but from

the outside it looks like a harmonious game. In talking with adult females who had played house frequently I was surprised to hear that it can be full of power struggles and passive aggression. For example, each household must have a baby, which is (I'm told) the least desirable role to play. Turn-taking taking should solve this problem, but sometimes when being the baby is on the line, equity and democracy give way to Realpolitik. Thus, even in a benign cooperative game like house there's room for competition and manipulation. All the more reason to think that play really does prepare you for adult life.

A separate question from how we ought play is how we ought to go about shaping play. One option is to *encourage* or *discourage* forms or modes of playing. This might involve praising sportsmanship or disapproving of excessive competitiveness. It could also mean buying one's children a playhouse or forcing them to pay for football equipment from their allowance. Another means of shaping play is to *mandate* or *prohibit* forms of play. For instance, we might require certain play activities during gym class or recess or prohibit certain sports from being played at the school level. Both mandating and prohibiting have their downsides. When mandating a form of play there is the risk of "taking the fun" out of play. When prohibiting a form of play there is the risk of making it more alluring or causing it to take place in unsupervised settings. Lastly, there is the question of whether *direct adult intervention* during play is the best way to ensure that the best values and virtues are reinforced. This might, for example,

diminish the extent to which cheating and manipulation are successful means of getting what one wants or increase the extent to which those of lesser skill get equal consideration or treatment. There is a danger in trying to script moral development in this way. As Piaget would argue, direct intervention by adult authorities might delay certain moral advancements such as the upheaval of the heteronomous conception of moral rules or the belief in immanent justice. One cannot simply be shown what is right, one must discover it for herself by actively partaking in equitable moral dealings.

We should take all the aforementioned considerations into account as we decide how best to shape children's play. However, we must also acknowledge our ignorance on the subject. We simply do not have enough data on the causal role of play in development. With this in mind, the steps toward reforming play should be moderate ones. Play as it currently is being practiced makes kids turn out all right. They could be better but they are all right. It's not unlike the childhood obesity problem (or at least what it was like some years before it grew worse). It's not to the point where we need to put kids on a crash diet; just make small sensible changes to the way they eat and see what happens. A responsible course of action for a parent or guardian would be to encourage her child to play a mix of activities, skewed toward the cooperative. The naturally aggressive child might require more forceful encouragement to participate in cooperative-cooperative games, but should be provided with enough well-monitored competitive play to provide a healthy outlet for aggression. For the naturally solitary



child, we can recommend that they play what they like so long as they have *some* cooperative play and *some* competitive play.

Importantly, we must not eliminate any one form of play, just as we wouldn't want to eliminate any one food group for a diet. Even if competitive games offer a less appealing spread of virtues and ideals, there's still value in competition. All children should know what it's like to win at something. All children should know what it's like to lose at something, and to be on a competitive team. There is value in all of permutations of competitive and cooperative and solitary play, because all of them have analogues in adult life. To be well-adjusted later in life, you need to be able to cooperate, compete, and do things on your own. If your play is well-rounded as a kid, it is no guarantee that you will be a well-rounded adult, but it is a guarantee that you'll have a range of experiences to draw on as you encounter new situations.

The goal here is not to resolve such complex questions decisively, but rather to bring greater awareness to them. We must acknowledge that play is crucial to moral development and take care in forming our attitudes towards it. Such care is becoming increasingly important given that the way children play has changed radically in the digital age. Children are moving *en masse* from the playground to the Playstation. It is hard to overstate the potential that electronics has to change the way we play. Children are no longer the authors of their play environments; they play in authored environments. This provides us with unprecedented control over what, how, and even how

much children play. We can determine both play's content and conditions of success. This power is not always absolute. The burgeoning market for “massively multiplayer online games” shows that unscripted human interaction is alive and well in electronic play. Still, electronic gaming changes the way children interact with each other and the way they relate to the world. Because of this, empirical and ethical inquiry into these matters are all the more pressing.

### *Concluding Remarks*

Piaget attempted to uncover the structure of human moral psychology through the study of games. His argument is grounded in a strong analogy between rule-based games and morality. According to Piaget, both consist of a system of rules that govern right and wrong actions, and both systems of rules come to be realized as conventional by the preadolescent child. The isomorphisms between games and morality foster a parallel evolution of cognitive structures. Autonomy in game rule consciousness is reflective of the similar transformation in moral rule consciousness because they are adaptations to twin problems of interpersonal cooperation.

The analogy between play and morality has sustained significant criticisms. Cognitive domain theorists have marshaled a wealth of evidence that children distinguish between moral and conventional rules. While this is far from fatal, it weakens the analogy considerably. Flanagan (1991) notes further disanalogies and rightly criticizes

both Piaget's overly narrow conception of morality as a system of rules and his narrow focus on rule-based games. When we broaden our focus to respect the diversity of play and morality, we find a wealth of ways in which play not only reflects morality but guides it. As I have argued, competitive, cooperative, and pretend play all provide different ways of expressing and shaping one's moral self.

One of the crucial mistakes Piaget made was to overlook his own insight that play is viewed as moral by the eyes of the child. Children do not have bank accounts, medical practices, or marriages. They don't run corporations or political action committees. They don't control the lives of vegetative patients or the paths of runaway trolleys. They are limited in the extent to which they make "serious" moral decisions. But play is serious to them as are its codes and conduct. Rules that are arbitrary and frivolous become normative when children settle down and make the commitment to play. One could argue that the core of morality is about balancing the interests of oneself with the interests of others. Children are interested in play. For this reason, we can view play as morality's playground. It's a safe place for them to practice the skills, acquire the virtues, and reinforce the values that will guide the rest of their moral lives.

## CHAPTER 5

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# What is play?

### *Pervasive and Elusive*

Everybody plays. Babies play, kids play, adults play. Dogs play, cats play, chimps play. You can play with blocks; you can play with dolls; you can play with your imaginary friend. Play is everywhere. As familiar as play is, questions surrounding its metaphysics remain unresolved. What is play? What distinguishes it from non-play? Can we bring play under a definition?

Defining play is difficult for a variety of reasons. First, play is a diverse phenomenon. A definition needs to capture what's distinctive about everything from playing chess to frolicking in a meadow. Second, play often resembles non-play activities. Play-fighting resembles real fighting; play-chasing resembles real chasing. An adequate account of play needs to be able to distinguish between these similar behaviors.

The biological, ethological, and evolutionary study of play requires that there be objective means of determining what is play and what is not. Definitions can offer objective criteria to the researcher<sup>1</sup>; however, each of the proposed definitions have seri-

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<sup>1</sup> There's some disagreement as to how pressing the need for a definition is. Allen and Bekoff

ous flaws. For this reason, no clear front-runner has presented itself, and some are even skeptical as to whether an adequate definition is possible (Chalmers 1984).

But the problem of defining play has not only garnered the attention of biologists but philosophers as well. Most seem to agree that play is autotelic, pursued for its own sake (e.g. Suits 1988, Meier 1995, Feezell 2010), or at least don't disagree that it is (Schneider 2001, Schmid 2009<sup>2</sup>). However, it can rather easily be shown that autotelicity is neither necessary nor sufficient for play

Though both biologists and philosophers have attempted to define play, their approaches are quite different. Biologists are primarily concerned with animal forms of play and with giving a definition of practical utility. Philosophers on the other hand have focused on human forms of play and doing conceptual analysis. The approach taken here draws equally from both camps. It seeks to provide an account that can be applied to animals and humans alike, that is an analysis of our concept of play and that is also appropriate for empirical applications.

As we will see, there are two hallmarks of play, the first of which is active engagement. Play is not passive; it's something that one *does*. The second hallmark is

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(1994) claim that an imperfect working definition should suffice until research has progressed. In defense of their view they cite the *Meno* passage in which Socrates says "He would not seek what he knows, for since he knows it there is no need of the inquiry, nor what he does not know, for in that case he does not even know what he is to look for" (Plato *Meno* 80e, Hamilton and Cairnes 1961). Knowing what play is (and being able to adequately define it) comes after inquiry, not before. Still, we can examine the various proposed definitions and see if we can come up with a better working definition or find the a place to look for an adequate definition.

<sup>2</sup> But not Schmid 2011.

that play is frivolous: the goals of play either do not exist or are not of any value.

Together these criteria provide necessary and sufficient conditions for typical exemplars or what you might describe as archetypal instances of play. Activities that fail to meet the conditions of a typical exemplar may still be considered play if they bear enough similarity to them.

### *Philosophical Accounts of Play*

In the philosophical literature, play is commonly claimed to be autotelic rather than instrumental; it is done for its own sake, not for the sake of something else. Given that this is the predominant assumption, we will start with this in our review of the literature before moving on to idiosyncratic views.

#### CONCEPTUAL ISSUES WITH AUTOTELICITY

Autotelicity is a deceptively complex notion that can be cashed out in a variety of ways. Schmid (2009, 2011) claims that there are no less than three (often conflated) conceptions of autotelicity in the play literature. Play could be conceived as an activity that is an end in itself, an activity that is intrinsically valuable, or an activity that is pursued for intrinsic reasons (Schmid 2011, 150). Schmid rejects the first two proposals because they ignore the relation between the activity and the psychological attitudes and motivations of the participant. We would be hard-pressed to isolate the objective properties

that make a play activity, and not a non-play activity, an end in itself or intrinsically valuable. Compare dogs that are play chasing one another and dogs that are actually chasing one another. What physical properties could be used to claim that one activity is intrinsically valuable or an end in itself while the other is not? Or to use Schmid's example, what would make the act of throwing a baseball intrinsically valuable and not the act of throwing a grenade. For this reason, Schmid claims that if autotelicity is to be a viable option in defining play then it must be that play activities are done for intrinsic reasons.

#### PROBLEMS FOR AUTOTELIC ACCOUNTS

Is all play done for intrinsic reasons? It at least seems that we can play for a variety of instrumental reasons. I may play Connect Four not for its own sake but for the sake of my nephew. Likewise, a high-school athlete may play baseball for the sake of getting a varsity letter, or a child might play house for the sake of getting to know her neighbors. A geriatric might play bingo for the sake of winning a prize. If autotelicity is a necessary condition of play, these will all become instances of non-play.

Proponents of autotelic theories have a couple of options. First, they could bite the bullet. They could claim that these are not genuine instances of play but rather forms of pseudo-play. However, taking this approach will result in there being an awful lot of pseudo-play that, from the player's and observer's perspective, seems an

awful lot like play. Another approach would be to claim that play is done for *mostly* intrinsic reasons<sup>3</sup>. This might save many instances of play, but at significant cost. It makes a somewhat arbitrary distinction between play and pseudo-play that depends on whether intrinsic or instrumental reasons happen to outweigh the other<sup>4</sup>.

A background concern is that play is frequently done for the sake of psychological benefits<sup>5</sup>. In particular, it seems that we often play for the sake of pleasure. Other times we may play for the sake of curing boredom. These are reasons extrinsic to the activity itself. Thus, play pursued for the sake of pleasure or for curing boredom is not autotelic. One might respond that play is pleasurable because it is pursued for its own sake, but this seems backward. If play weren't pleasurable then we wouldn't pursue it for its own sake; we wouldn't pursue it at all.

Just as there are problems in treating autotelicity as a necessary condition for play, there are problems treating it as a sufficient condition as well. There are many activities that may be done for their own sake that are not play. One might go see a movie or have a conversation or take a gratuitous nap. The problem becomes worse when we consider animals of limited cognitive sophistication. If they can be said to

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3 This appears to be Meier's (1995b) approach. He defines autotelic activities as ones which are "pursued for predominantly intrinsic reasons" (32).

4 Schmid (2011) makes a similar criticism, saying, "The concept of autotelicity is not one that admits of degrees. To admit that one's actions are more or less intrinsic is to give up on the concept altogether" (157).

5 Schmid raises a similar concern while noting the mixed motivations we have while playing. "Isn't playing a game because it is "fun"...a type of "further purpose" which prevents that activity from being purely autotelic and thus not a candidate for play?" (155).



have reasons for their behaviors, then too many of their activities will be autotelic because they don't have the foresight to make their actions instrumental. For example, I should think that for a sea bass there are no activities that are instrumental. When they see prey, they attack it, not because they think they will get a meal but simply because that's what they do. Every action of the sea bass is for its own sake. One might respond that the sea bass has an evolved psychology such that it wouldn't chase the prey unless there were a good chance that it would get a meal. In this sense it is instrumental. However, in this sense play is also instrumental. As discussed in chapter 2, play is an evolved behavior that has payoffs to the organism, for example, preparing the animal for unexpected events (Spinka et al. 2001). Thus, from the evolutionary perspective, play is not for its own sake, its for the sake of the benefits it provides the individual.

These considerations constitute my general criticism of autotelicity being the defining characteristic of play; however, autotelicity is not the only attribute proposed by philosophers.

## VOLUNTARINESS

Klaus Meier (1995) claims that autotelicity is necessary and sufficient for play, if and only if the person playing is doing so *voluntarily*. His definition, which we can refer to as “(D1)”, is reproduced below:

(D1) “There are two major necessary and sufficient components of the play stance. First, play is of necessity, a voluntary endeavor which cannot be forced, externally demanded, obligated, or imposed by necessity, coercion, or any form of duty...Second, play is an autotelic activity. That is, play is an intrinsic, noninstrumental, self-contained enterprise.”  
(Meier 1981, 121)

The claim that play is voluntary is not unique to Meier. In his seminal writings on play, Johan Huizinga makes the same assertion (1950). “First and foremost...all play is voluntary activity. Play to order is no longer play: it could at best be but a forcible imitation of it” (7).

While most play is voluntary, this is not always the case. We can be required to play just as much as we can be required to work. Physical education classes obligate students to play, even when the students would happily play on their own accord. Or consider a mother telling her idle child, “Go out and play”. She is not issuing a logically unsatisfiable command. Animal cases present additional problems for Meier’s definition. It is not clear that many animals are capable of voluntary action if we use a stringent conception of voluntary action; thus, they would not be capable of play. If animals are capable of voluntary action, then, as with humans, they can be involuntarily made to play. Consider a dog that starts chasing another dog and thereby coercing it to play. The second dog is genuinely playing even though it may not have done so voluntarily.

## REALLOCATION OF RESOURCES

Bernard Suits (1988) offers a definition of play that, like Meier, emphasizes autotelicity. However, unlike Meier, Suits argues that play can only exist in contrast to instrumental activities. He writes:

(D<sub>2</sub>) “X is playing if and only if x has made a temporary reallocation to autotelic activities of resources primarily committed to instrumental activities” (Suits 1988, 22)

Suits has a broad conception of what “resources” means. It could be a rock, a ball, a bat, or it could be one’s time or energy. Since time is always required for play, Suits very nearly makes autotelicity a sufficient condition for play. There are however logically possible conditions under which an autotelic activity would not be considered play. If there were no reallocation of time (or other resources), then the activity would not meet the criteria for play. This occurs in Suits’ vision of utopia, in which everyone is partaking in autotelic activities all of the time. There are no instrumental activities so there is no way to reallocate resources from them.

While Suits’ analysis is both novel and interesting, it’s not the most appealing theory. Consider Suits’ utopia in which all autotelic activities are pursued all of the time. Say its one in which everyone is “partaking” in checkers indefinitely. If everyone is not *playing* checkers, what are they doing? Or consider a cat that whenever it catches prey only plays with it and never eats it. The cat, whose days are numbered, would not be considered to play on Suits’ account. Yet, the activity of the cat is indistinguishable

from the play of other cats and is the result of the same evolved mechanisms. There is really very little holding us back from asserting that the cat is playing all of the time, even if there is no reallocation.

### A NON-AUTOTELIC THEORY?

Schmid's (2011) account breaks from the trodden dialectic in two important ways. First, he doesn't use the traditional notion of autotelicity as the basis of his account, and second, he grounds his theory in concepts from empirical psychology, specifically Self-Determination Theory (SDT), which was discussed at length in chapters 2 and 3. However, while both of these departures are deserving of praise, it's not clear they result in a great deal of progress.

Schmid doesn't so much abandon autotelicity as re-engineer it by tying the notion of intrinsic reasons to SDT concepts. When Schmid says that play is done for intrinsic reasons he doesn't mean that it is done for its own sake, he means that it's done for reasons that foster autonomous motivation and feelings of autonomy, competence, and relatedness.

(D<sub>3</sub>) We would be inclined to call that person's behavior play when he perceives himself as acting autonomously (to a greater degree than not) and when his goal aspirations are those that tend to produce more satisfaction and well-being than not.

Schmid's approach does fair better than traditional autotelic theories at handling cases of mixed-motivation. The example he uses is of Bob who plays a sport to win a college

scholarship. Bob isn't participating for its own sake (i.e. it's not autotelic) but if Bob is autonomously motivated then it doesn't matter, the activity can still count as play.

But the problems with this account are many. Setting aside the fact that the distinction between autonomous and controlled motivation is highly gradated and messy, and setting aside the fact that there will be considerable difficulties in capturing animal play considering that SDT concepts may not apply in such cases, the main problem with Schmid's account is that it's hopelessly broad. Supposing that half of all actions are autonomously motivated, which is a conservative estimate for a lot of people, half of the things we do would be considered play. It could be walking the dog, or emailing a friend, or going on a date, or lifting weights. By appealing to autonomous and controlled motivation, Schmid is trying to capture the work-play distinction, but the motivational concepts he uses to do it are far too expansive. Not everything is work or play or some mixture of the two. There's entertainment, exercise, love, socializing, eating, drinking, grooming, travelling, etc.

### *Biological Perspectives on Play*

The play literature for evolutionary biology, ethology, and comparative psychology has a considerable focus on what the function of play is. As discussed in Chapter 2, there are a number of different competing theories that we need not revisit. Relevant to our inquiry is the fact that some biologists have attempted to define play in terms of its

function (see Pellegrini 2009); however, this approach has a number of downsides. First, the sheer number of purported functions is indicative of the lack of consensus over the function of play. Defining play in terms of one hypothesis is bound to be speculative and controversial. Furthermore, there are many compelling hypotheses about the function of play, which suggests that play has multiple functions. It is unlikely that any single function will capture play's complex contributions to reproductive fitness. Irrespective of these considerations, I would argue that a functional definition will only tell us what play does, not what it is. Suppose we knew for certain that play prepares the individual for the unexpected. We would still want to know what it is that is doing the preparation, especially in light of the fact that there are many non-play activities that prepares one for the unexpected.

Another approach to defining play is to isolate the “structural” components of the behavior (see Pelligrini 2009). Common structural descriptions of play (for animals) include: running, jumping, soft-hits, and the making of play faces. While these descriptions may be indispensable in the field, they won't be very helpful to the project at hand. Play is simply too diverse a phenomenon. Any list of physical descriptions of play will have to be abbreviated. Furthermore, features like running and jumping are not distinctive of play; they appear in many activities. Part of the challenge of defining play is moving past the physical similarities to non-play.

## PLEASURE AND FUN

With these considerations in mind, let us examine some proposed definitions of play from the biological literature. E. O. Wilson (1975) provides the following account:

(D4) “Play is a set of pleasurable activities, frequently but not always social in nature, that imitate the serious activities of life without consummating serious goals” (Wilson 1975, 164)

The first thing to notice is that Wilson makes pleasure a necessary feature of play, which upon examination can be seen to be too strong. Many play activities are pleasurable, but it's not clear that all of them are. Consider dogs playing chase. The chasing dog may be taking pleasure in the activity, but it's not clear that the chased dog always is. The chased dog may sometimes appear to be experiencing an analog of fear; the hair on the back of its neck may stand up and its tail may go down. If the dog is experiencing pleasure it's not obvious from appearances.

Even if pleasure is not common to all play, Wilson's attempt to capture the emotional state of play is something that has been picked up by other biologists. Spinka et al. (2001) claim that “fun”, rather than pleasure, is the base emotion in play. Fun is a more complex emotion and may be better suited to characterizing the multifarious experiences of play. They describe the emotional state of play as follows: “Play is emotionally exciting (perhaps even thrilling, though not intensely frightening) and rewarding, maybe even pleasurable, while at the same time being relaxed” (144). Spinka et al. can handle cases like dog chases better than Wilson. The chased dog may find the

activity exciting and rewarding if not pleasurable *per se*<sup>6</sup>. Still, play is not always fun. It's usually fun, and when it's not fun we tend to stop, but it's not always fun. Anyone who golfs can tell you that.

Fun may be the primary reinforcement mechanism for play. It may be that fun evolved to reinforce play behaviors that serve some biological function. But there are other reinforcement mechanisms. Just as we may play because it's fun, we may also play for a sense of accomplishment. We may play Minesweeper well past the point of fun in order to set a personal best. We may play tennis past the point of fun in order to best an opponent. These feats of play are motivated by something other than the fun of the activity. However, even if fun is not necessary to play, might it be sufficient? A quick examination will show that it is not. Watching a movie is fun, as is having a conversation. Sometimes one's work is fun, but when it is it doesn't necessarily become play.

## SERIOUSNESS

Now let us consider the rest of Wilson's definition: "[Play activities] imitate the serious activities of life without consummating serious goals" (164). There are two aspects of this statement to note. First, play is considered non-serious or at least is contrasted with serious activities. Second, play is an imitation of these other activities. Let us deal with these in turn.

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6 Whether or not the dog is relaxed is another matter. Spinka et al. leave open the possibility that a playing animal be non-intensely frightened, but still frightened, which seems at odds with being relaxed.



Wilson is not alone in claiming that play is not serious. Pelligrini et al. (2007)

use the same verbiage in their definition:

(D5) “Play is a seemingly “non-serious” variant of functional behavior. Playful behaviors resemble serious behaviors but participants are typically more concerned with the behaviors themselves (i.e., “means”) rather than the function (i.e., “ends”) of the behavior.” (264).

Bekoff and Beyers (1981) hint at the same “non-serious” sentiment by defining play as apparently “purposeless”:

(D6) “Play is all motor activity performed postnatally that *appears* (our emphasis) to be purposeless, in which motor patterns from other contexts may often be used in modified forms and altered temporal sequencing” (Bekoff 1981, 300)

Lastly, Mitchell (1990) describes the ends of play as “frivolous” (a term that I will borrow) which seems to express the same sentiment as saying that play is “non-serious” or “apparently purposeless”, but with no less vagueness since he leaves the term relatively unanalyzed. My account picks up on this common thread, but attempts to cash out vague terms like “non-serious”, “apparently purposeless”, and “frivolous” in terms of *goals* and *value* and the formal properties of the activity.

## IMITATION, SIMULATION, RESEMBLANCE

The second part of Wilson's view, that play is an imitation of other activities, has been criticized by Rosenberg (1990) who argues that the act of imitation is too cognitively complex for most animals<sup>7</sup>. Imitation, he argues, requires that there be “a representa-

<sup>7</sup> Rosenberg makes a number of criticisms with this one being the most applicable to our present

tion of the behavior to be imitated, together with the recognition that it will be produced as a pretense” (183-184). Thus, imitation of a serious behavior entails high-order intentionality on the part of the organism, a capacity of which many playing animals may be incapable.

This concern can be side stepped by following any one of three approaches found in the literature. The first would be to replace “imitation” with “resemblance” as is done in (D<sub>5</sub>). Play behaviors can resemble serious behaviors without any recognition of the resemblance or intention to behave in a manner that resembles serious behaviors. It bypasses the criticism that animals are not cognitively complex enough to imitate but at the cost of being less specific. Resemblance is more general and holds between more sets of behaviors. It says less about the nature of the relationship between play and non-play.

An alternative approach can be found in Mitchell (1990), who appeals to simulation rather than imitation or resemblance. His criteria for simulation is as follows: “Simulation means that s resembles f because s is designed to be like f” and “the end of s is (intended to be) benign, if only in comparison with the end of f” (Mitchell 1990, 206-207). Thus, “simulation” is more specific than “resemblance”; it posits an explanatory connection between the play behavior and the simulated behavior<sup>8</sup>.

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aims. The thrust of Rosenberg’s arguments are to discredit the notion that there can be an evolutionary biology of play.

8 Mitchell's definition of simulation may be stronger than is desirable. Mitchell says that “s is *designed* to be like f” (emphasis added) which use appeals to the notion of “design”. He defines

Lastly, Wilson's "imitation" requirement can be avoided by claiming that play enacts the same motor patterns as serious activities, an approach taken in (D6). This definition contains an empirical claim that the motor patterns from non-play activities reappear in play activities. This is precisely the type of account that was given in chapter 2, which argued that play is produced by behavioral-motivational systems that are not specific to play.

Even if some play activities imitate, resemble, simulate, or otherwise mirror serious activities, it's doubtful that all play activities do so. Consider object play. This is a simple form of play in which an object is manipulated. Object play is common in the animal kingdom but often lacks an activity that it simulates. Consider a baby playing with a rattle. She may shake the rattle and thrash about without any of the movements simulating a serious behavior. Simulation may be better thought of a feature of many play activities without its being an essential feature of play itself<sup>9</sup>.

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it as follows: "Design occurs either through the organisms' *intention* to simulate, or through some other processes (such as natural selection or learning) with the result that the simulation is (unintentionally) functional" (207). This asserts that the resemblance between *f* and *s* is intentional or is a selected effect. It rules out that the resemblance is a functionless by-product, which in some cases may be a real possibility. Say the function of *s* is merely to burn off excess energy (e.g. Barber 1991). The fact that *s* resembles *f* is not because it's designed to be that way; it's merely due to the fact that *some* motor program needs to be activated. It is easier to activate an extant motor program than to design a new one *ex nihilo*. In this case, the resembling features of *s* are functionless by-products. *s* is not designed to be like *f*, even though *f* is causally related to *s* and *f* explains the presence of *s*. Mitchell could avoid this problem by reverting to the Danto (1981) notion of simulation that he modifies. Mitchell writes, "Simulation entails that one thing *s* (the simulation, e.g. playfighting) resembles another thing *f* (the thing simulated, e.g. fighting), and that *f* enters causally into the history and explanation of *s*" (206). Though less specific, this formulation avoids the functionless by-product objection.

<sup>9</sup> This move would be resisted by Mitchell (1990) who argues that play is constituted by two types of activities: autotelic and simulative. He defines autotelic play as an activity that is directed at a

## MEANS

The last thing to consider is Pelligrini et al.'s (2007) claim in (D<sub>5</sub>) that the means in play are more important than the ends<sup>10</sup>. This sits well with the widespread phenomenon of self-handicapping (see Spinka et al. 2001). Still, the means aren't always stressed over the ends. When dogs chase each other, the chasing dog is trying to catch up to the chased dog as fast as possible and the chased dog is trying to be evasive as possible. The end is all-important. The means are chosen for the efficiency with which they attain the end.

### *Hows and Whys of Defining Play*

It's good to ask the *why* question before you get invested in any project that requires considerable investment. Why define play? To some readers this may be the single most important question of the chapter, and the one with the least satisfactory answer. This is at least the background concern for someone about to advance a theory of play. It's the very same worry that Bernard Suits voiced at the outset of his paper, "Words on Play".

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"frivolous" end or is "frivolously enacted" and is either enacted for its own sake or for the sake of pleasure. Simulative play, as discussed before, is behavior that is designed to be like other behavior but is directed at "benign" ends. To be play, an activity must be autotelic or simulative. This definition raises serious questions as to whether play can be brought under a single concept. If the definition of play is disjunctive, what makes each of the disjuncts part of the same phenomenon? Mitchell doesn't provide an answer.

<sup>10</sup> This claim reappears in Pelligrini (2009).

I propose to advance and defend a tentative definition of play. This may not strike all of you as a terribly exciting prospect. For I am well aware that there are topics the very contemplation of which induces in some people definite—and sometimes violent—rejective reactions (1988, 17)

He continues,

*Why* do I want to define play? Because it's there? Partly, no doubt. But chiefly because a definition is a kind of restriction or limitation, and I believe that ever since Huizinga began to find play under nearly every rock in the social landscape, quite a bit too much has been made of the notion (17)

Despite being dressed up in Suits' trademark charm and wit, the substance of his answer is less than compelling. It's essentially that (a) it's there, and (b) somebody else tried to do it and did a poor job. That it's there is not a good justification for defining play, since there are any number of dictionary entries that could be given a philosophical treatment. That somebody else tried and failed is not a good reason if there was no good reason motivating the first attempt. Though to be perfectly honest it might weigh on my conscience knowing that I did nothing to prevent future generations from thinking play was autotelic.

The best motivation for defining play, from a philosophical perspective, is that it is an important concept to us as human beings. Play is a generous and underutilized source of meaning and fulfillment. It enriches our lives, plays a role in our ethical lives, and in our moral development. Having an account of play is crucial to our understanding of what it is that is doing all of these things.

Biological accounts are motivated in a different way. Definitions can give researchers objective criteria which can be used to form behavioral categories, score instances of behaviors, study the phenomena generally, and relate them to other functional categories. Defining play could be a step toward comprehending a phenomenon that is too pervasive, too prominent to be responsibly ignored.

These two motivations, one philosophical, one biological, ask for different things out of a definition. The philosopher asks for an analysis of our concept of play. The biologist asks for a definition that's based not on us but on natural or useful divisions. Can these two approaches be reconciled? I am hopeful that they can, for I see play as one case in which the human brain does a pretty good job of forming a concept around a natural or at least scientifically useful category. There's no radical disagreement between what the lay-person calls 'play' and what the biologist calls 'play'. But the only way to be sure that our concept picks out something biologically real or useful is to do a good job of conceptual analysis and then see how well the resultant account can be integrated into the biology.

I wish to proceed under the hypothesis that we may craft our definition of play without making concessions to either the biological or philosophical camps. So long as we are having our cake and eating it to, I wish to borrow from two very different theories of concepts, in the hopes of reaping the benefits of both. The classical approach to conceptual analysis is to search for necessary and sufficient conditions, which in scien-

tific applications provide objective criteria for classification. Thus, if play were able to be defined in this way, it could be of great utility. The problem with choosing the classical approach is that the evidence from the cognitive sciences strongly suggests that concepts are not encoded in the brain as necessary and sufficient conditions. This robust finding has buried the classical theory insofar as it is a psychologically realistic account of concepts.

In the void left by the classical theory, there are but a handful of potential successors, one of which is the exemplar theory, which claims that conceptual judgments are based on relative similarity to previously categorized exemplars. For instance, if one came across a kiwi for the first time the exemplar theory holds that one would compare it to previous fruit exemplars, instances of fruit stimuli, and if the resemblance was strong enough, the kiwi would be categorized under the concept of *fruit*. The exemplar theory is similar to the prototype theory, except that on the exemplar theory new stimuli get categorized by comparisons to particular instances of a concept, whereas on the prototype theory new stimuli get categorized by comparisons to composites or averages of multiple previous instances. Importantly, exemplars need not be given equal weight. Typical exemplars are ones that are the most representative of the exemplars falling under a concept. They have the highest degree of “family resemblance” (Smith and Medin 2003).

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ii This phrase first appeared with respect to concepts in Wittgenstein (1953).

The approach of this chapter will fall somewhere in between the exemplar and classical theories of concepts. Judgments will be made relative to typical exemplars; however, we will specify what counts as a typical exemplar by using necessary and sufficient conditions. Thus, we will state conditions under which an instance of an activity is to be considered a typical exemplar of play, and similarity to these typical exemplars determine what is and is not play. To be sure, there will be cases in which it is not clear if similar is similar enough, and the account will not be able to make a determination as to whether an activity is play, but if the model is a faithful to our concept this will only arise when our own intuitions are also ambivalent as to what is actually the case. It's also worth noting that by incorporating necessary and sufficient conditions into our account we have made for a less psychologically realistic account. However, this drawback is worth the benefit to the account's scientific utility.

### *Play as Active and Frivolous*

The first step toward progress is to carefully consider the logical structure of an activity before we can say that someone is playing it. In particular we need to consider the required goals and required means of an activity. For any given activity  $a$  and person  $x$ , if  $x$  is doing  $a$ , we can ask what goals must  $x$  necessarily have? In other words, what goals, if missing, would we no longer say that  $x$  is doing  $a$ ? For example, what goals are necessary for someone to have if they are cooking? Well, if you are cooking, then you



must have the goal of making food. If your goal is not to make food, then you are not actually cooking. We can also ask what means restrictions must  $x$  observe for  $x$  to be *a-*ing? Consider the activity of sailing. If you are sailing, you must be traveling by means of a boat. If you are traveling by schooner, you are most likely sailing. If you are traveling by bicycle you are most definitely not. As will become clear, these required goals and means are critical to what makes play play.

Here is the nutshell version of the theory: Play is active and frivolous. More specifically, all typical play activity exemplars require that one exhibit a degree of active, rather than passive, engagement and *require* that one either have (a) no goals, (b) valueless goals, or (c) inert means, means that cannot bring about valuable goals. If an activity requires active engagement and requires that one has no goals, valueless goals or inert means, then that activity is a typical exemplar of play, and other activities may be considered play if they sufficiently resemble it.

## ACTIVE ENGAGEMENT

When we play we are *doing* something; we are active causal agents in the world. Contrast this with activities that share some of the common features of play but are not active. Watching a movie, getting a massage, taking a nap, all of these may be autotelic, voluntary, pleasurable, fun, non-serious, etc. The reason these are not play is that the

individual is only passively engaged in the activity. They are *letting* something happen, not *making* something happen.

References to “active engagement” in the biological literature are relatively scarce and in the philosophical literature seemingly absent. Pelligrini has criticized biological references to the term on the grounds that, when present, it is “vaguely defined” if defined at all (Pelligrini 2009, 17). It is our task then to try and do better.

An activity requires active engagement when it requires that you intentionally bring about changes to the way the environment or yourself would have been had you not intervened. In other words, you must be manipulating something. In hockey, you manipulate the puck in the hopes of putting the puck in the goal. In rock climbing, you manipulate yourself in order to get to a new location. Every instance of active engagement is one in which you are doing something, not allowing something to happen<sup>12</sup>.

## FRIVOLOUSNESS

In addition to being actively engaging, typical exemplars of play are inherently frivolous, not aimed at any goal or only goals that are valueless outside of the context of the activity. Frivolousness can be made precise by considering the necessary goals and

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<sup>12</sup> Notice that this does not require that there be external behavior. Sometimes what’s manipulated is one’s internal environment. Consider an avid chess player who can play chess in her head. This is a case where there is no external behavior, but there is still active engagement. What is manipulated is the imaginary pieces. The goal is to duly move the imaginary pieces so as to bring the imaginary king into checkmate.

means of an activity. To drive this concept home, in soccer, you have to have the goal of putting the ball in the opponents net and you have to observe the prohibition of using one's hands as a means. If one doesn't have this goal or doesn't observe this means restriction, one is not playing soccer. While soccer has a goal requirement *and* a means requirement, not all typical exemplars have both. What they do all have is a goal requirement *or* a means requirement that are related to frivolousness. So long as an activity *a* requires that one be active to some degree, any of the following three conditions is sufficient for *a* to be a typical play exemplar.

- (1) *a* requires that one have no goals
- (2) All of the goals *a* requires one to have are of no value in contexts other than *a*
- (3) None of the means *a* permits can be used to achieve a goal that is of any value in contexts other than *a*

These are three different ways something can be play, which correspond to three dimensions or natural groupings of play. Rudimentary locomotor and object play tend to be related to the no-goals exemplars that satisfy the first condition. Games tend to be related to valueless-goals exemplars that satisfy condition (2). Pretend play tends to be related to the inert-means exemplars that satisfy condition (3). Let's take a moment to analyze each of these three different types of play.

## NO GOALS

Locomotor play occurs when an individual is moving around for little or no reason.

Most object play occurs when an individual is grasping, throwing, colliding or otherwise manipulating objects often with little planning or direction. What locomotor and object play activities have in common is that they either require that one have no goals, or they are related to typical exemplars which require that one have no goals. The following is a paradigmatic example of this type of play:

(a) Frolicking (i.e. running, jumping around without any purpose)

To truly be frolicking, one cannot have a goal for one's movements. It's all exuberance, no foresight. The moment one begins to have goals for one's actions, one is no longer frolicking in the purest sense of the term. In this way, frolic meets criterion (1); it requires that one have no goals, and since one needs to be actively engaged to do it, it can be considered a typical exemplar of a no-goals play activity.

Other activities fall under this category of play, but may not share in frolic's purity of purposelessness. Consider the following example from Suits (1988):

(b) Playing with one's food

To be playing with one's food, it is not necessary that one has *no* goals, even though this is often times case. However, for playing with one's food to be sufficiently similar to no-goals exemplars, one can only have minute or transient goals. You might have the

goal of arranging your beans into the shape of a smiley face, or of making a mountain out of mashed potatoes. If your goals get too grand or longstanding, it may be that you are no longer *playing* with your food. For instance, if you were hours into making a scale mashed potato model of Mount McKinley, you're less *playing* with your food and more *sculpting* with it. Thus, if an activity is to be sufficiently like the typical no-goal exemplars, then one must have goals that are sufficiently inconsequential or ephemeral.

### VALUELESS GOALS

The second type of play occurs when the activity requires that you adopt goals that are of no value. Take the following familiar example:

(c) Playing a basketball game

What is required for one to be playing basketball? You might say that one is required to have the goal of winning, and this would be partly correct. However, winning is a loaded term that is associated with being a winner, with bragging rights, and trophies etc. One need not have any of these as goals to play basketball. What one needs to have is the goal of securing the conditions of victory. One wins a game of basketball if and only if one's team scores more points than the other team. Thus, the goal that's required by everyone who plays basketball is to score more points than the other team.

This is not to say that you can't have other goals while you play basketball, but at the very least you must have this goal.

Points are great things to have when you're playing a game, but when the game stops, they are quite useless. You can't go shopping with them, you can't trade them for groceries or clothing or mutual funds. It's only within the context of the activity that points have value. In fact, it is only within the context of the activity that it makes sense to talk about points. For this reason, playing basketball is a typical exemplar of a play activity since it fulfills criterion (2) in virtue of its requiring that one have a goal of no value outside the context of the activity.

For a non-typical play activity of the valueless-goal sort, we might consider the following example:

(d) Playing "basketball" with balled up garbage and a wastepaper basket

This activity requires that you have the goal of getting the garbage in the wastepaper basket, and the reason it is not a typical instance of play is that throwing away garbage is valuable, not immensely valuable, but valuable nonetheless. That being said, the goal is of such little value and the formal properties of the activity are so similar to typical play exemplars like basketball, that we may consider it play. However, in certain contexts it may be a little of both play and cleaning. It may depend on the instance of the activity and the attitudes of the participants. Specifically, a pivotal feature may be the

extent to which outside of the context of the activity one values having the garbage be in the trash can. The more this is valued by the individual the further it gets from the second criterion and the less similar it is to valueless-goal exemplars.

### INERT MEANS

The last category of play owes to a restriction on means. There may be no specific goal one has to have in this type of play, but there is always a restriction on the types of means that one can use. Take the following example:

#### (e) Playing house

When playing house, one is permitted to have any number of goals. One can have the goal of baking an imaginary cake, or feeding an imaginary baby, or doing imaginary laundry. But whatever goal one has it must necessarily be achieved by make-believe means. If you're not using pretend means, then you're not playing house.

Make-believe means are causally inert with respect to the real world. Pretend to mow the lawn all you like, you're grass will never get shorter. By limiting what means one can use, this type of play limits the sorts of goals one can achieve by them. If you are required to use only pretend means, you must choose a pretend goal if you want to get anything done. Moreover, pretend goals are valueless. You wouldn't buy an imaginary cake from someone, you wouldn't pay someone to babysit your imagi-

nary child, and you wouldn't give up your lunch break to have your imaginary clothes laundered. For this reason, house is a typical exemplar of inert-means play.

We judge that the means are inert not only on the basis of the valuelessness of the achievable goals, we instinctively compare the means to their non-play counterparts. Pretend cooking is naturally compared to real cooking, and since the goals one can achieve by real cooking are much more valuable than the goals one can achieve by pretend cooking, we judge the means permitted in pretend cooking to be relatively inefficacious. Importantly, it is in virtue of these counterpart comparisons that other activities are seen as similar to inert-means exemplars . Consider the following:

(f) Playing with a toy bow and arrow

There may be some things you can do with a toy bow and arrow; it's not causally isolated from the real world in the way that imaginary means are. Nevertheless, a toy bow and arrow cannot achieve goals that are as valuable as the ones achievable with a real bow and arrow. Using the toy bow and arrow as a means is relatively inert; it can bring about fewer valuable goals. The relative inertness leads to the judgment that using a toy bow and arrow is sufficiently like inert-means exemplars and must be considered a form of play.



## THEORETICAL CLARIFICATIONS

It's time for the nitty-gritty details. Here's one formulation of the necessary and sufficient conditions for an activity's being a typical play activity exemplar.

Activity  $a$  is a typical play activity exemplar iff  $a$  requires some active engagement and  $a$  either requires that one have *no goals*, or all of the goals that  $a$  requires (which must be at least one) are of no value outside the context of  $a$  (*valueless-goals case*), or the means that  $a$  requires one to use are incapable of achieving goals that are of value outside the context of  $a$  (*inert-means case*).

This should be relatively straightforward; however, we must address the notion of *valuelessness*. Trying to be as neutral as possible, we can say that a goal is valueless if it's not intrinsically valuable or instrumentally valuable. It's not good in itself and it's not good for getting anything that could lead to something that's good in itself. This formulation takes an objective perspective toward value, which is appropriate when talking about activities generally, but needs to be tied to a perspective when considering individual instances of play. With this in mind, the following:

$x$  doing  $a$  is a typical exemplar of playing iff  $x$  is doing  $a$ ,  $a$  is a typical play activity exemplar, and  $x$  only has goals that are required by  $a$ , directly related to goals required by  $a$ , or that are achievable by  $a$ 's inert means, and  $x$  doesn't value her goals outside of the context of  $a$ .

A couple things to note. First, it's stipulated that  $x$  only has goals that are related to a goal requirement or related to a means requirement. The reason for this is to prevent instances in which  $x$  has a slew of random goals from becoming typical exemplars, since this would hinder the relevant psychological comparisons. However, it's important to

note that frequently if not most of the time individuals do have goals that are not required by the activity or are not the end of an inert means. For instance, one might play chess with the goal of becoming better at reasoning, one can play house to better know one's neighbors. These are perfectly good instances of play. They are just not typical exemplars of play.

Second, for  $x$  doing  $a$  to be a typical exemplar of play,  $x$ 's goals must be of no *objective* value, and also this second definition makes it such that  $x$ 's goals must be of no *subjective* value to  $x$ . This saves us from having to consider  $x$  as typically playing when  $x$  is working toward something she values but is not of objective value.

## COUNTER-EXAMPLES

Since we've covered the nuts and bolts of the theory, it's time to put the theory in action and entertain some counter-examples. Some readers may view this as a tedious and unnecessary exercise, others as a sort of game itself, and still others an important way to test a theory. I have sympathies with all three camps. Read according to your interest level.

### (g) Weight-lifting

Weight-lifting isn't play, yet it can seem to have valueless goals. Your goal is to raise a large weight up in the air only to have it drop back down to where it started. Where's the value in that? There's no value in pushing a weight up and down, and if this were

the only goal required of weight-lifting then indeed it would be play. However, weight-lifting is a form of exercise, and exercise requires that one have at a minimum one fitness-related goal, whether it be to get stronger or merely to “get a good workout”. If you have no fitness-related goals then you’re not really weight-lifting, you are in fact playing with weights.

(h) Practicing free-throws

Practicing free-throws is not a typical exemplar of playing, even though the goal of getting the ball through the hoop is valueless. Practicing, like weightlifting, requires that one have a goal of changing oneself, in this case changing one's skill level for the better. If the goal is not to get better, then one isn't really practicing but is rather playing a rudimentary game in which case one might be playing.

(i) Playing professional football

Some philosophers claim that professional athletes don't always or even usually *play* the sport of their employ (e.g. Suits 1988). On my account, there's nothing contradictory about getting paid to play, because there's nothing about playing football that requires you to have the valuable goal of getting paid. To be sure, getting paid may be the *reason* one plays football but that just means that it might be what motivated you to get to the stadium, not what motivated you to get into the end zone. I think nearly all professional athletes play their sports, because nearly all of them have the required

goal of winning. However, it's conceivable that you could find exceptions in athletes who are utterly detached from the goal of winning because they are focused on padding their statistics or avoiding injury because they're in a contract year. This is possible, but relatively rare.

(j) Raising one's arm for no apparent reason

Sometimes I do things for no reason. I might type “qerpuwoietghadfsj” just because it feels nice to press the keys. Is this play? It's certainly not valuable, but raising one's arm for no reason or typing gibberish are not play because they are not activities. They are not sustained for any considerable length of time. You don't even have time to say, “what are you doing?” only, “what did you do?” If one kept raising their arm for no reason or kept mashing her keyboard then we might say they are doing an activity with a required goal of no value. Until then it is not play.

(k) Competing in a beauty pageant

This example is challenging because it looks like the goal of beauty pageants is (or at least could be) to garner the most votes. Outside of the context of the pageant you can't sell votes or trade them for anything so they appear to be valueless. If this were the case, beauty pageants would not only be instances of play, they would be typical play exemplars

With the goal of defusing this counter-example, one could try to claim that competing in a beauty pageant isn't an activity and thus is not a play activity. However, at worst this would force one to conceive of competing in a pageant as a set of activities, and it would be no difficult matter to imagine a beauty pageant that had only one event and thus was constituted by one activity.

A better response to this objection is to deny that votes are valueless outside the context of the activity. What do votes stand for? Are they like points? You get points if and only if a ball goes through a hoop in the right context. Outside of the context of the activity, getting a ball through a hoop is valueless, so at best, points are representations of the achievement of a valueless states of affairs. What do votes represent? Votes are judgments by trained officials that you're the best at something; they're like little trophies, little valuable trophies. If your goal is to garner votes your goal is also to be considered the best of the bunch by a majority of judges, and this may be valued to a great degree by a great many people.

If you don't buy the votes-are-little-trophies-argument, consider this similar but distinct line of reasoning. Competing in a pageant requires one to have the goal of winning the pageant, but there are different, equally acceptable ways of construing this goal. Some may identify the goal with garnering the most votes while others may identify it with winning over the respect of the judges while still others may identify it with being the best contestant. Even if you dismiss votes as being valueless, the respect of the

judges is not valueless nor is being the best contestant. And if competing in a pageant requires that one merely adopt one of the three goals, then the activity doesn't *require* you to have a valueless goal.

(1) A video game addict playing a video game

When people become addicted to video games, they may choose to play them to the exclusion of other activities, or they may spend money they don't have on in-game upgrades. They appear to genuinely value these video game goals, so are they still *playing* their games?

Video games often have valueless goals *and* inert means. There is typically a goal that is required for one to play (e.g. get Mario to the end of the level) and the means are restricted to the digital interface inputs (e.g. up, down, left, right, A, B, start, select), which can only be used to achieve goals in the game world. Now it's true that the goals required of the player and the goals achievable through the means are of no objective value; however, it's worth wondering if the player does or does not subjectively value these goals. After all, she is pursuing these video game goals to the exclusion of pursuing real goals.

While we can usually tell which goals are more valuable to a person on the basis of which goals a person chooses to pursue, play is special in that it is often for the sake of the activity that we pursue the goals. In other words, it's not that we do the activity

in order to achieve the goals, we achieve the goals because we're so engrossed in the activity. The fact that one is addicted to a video game is strong evidence that one values the activity more than other important life goals, but does not necessarily mean that she values the objectively valueless goals of the video game. In any event, if the video game addict *did* subjectively value the required goals, she can still be *playing* the game, but she cannot be *typically* playing the game, since it deviates from the necessary and sufficient conditions.

### ANIMAL CASES

The animal cases I address are decidedly more important than the cherry-picked counter-examples, since I have criticized other accounts for not being able to accommodate animal play and prided my own account for being able to do so. With this in mind, consider the following:

#### (m) Dogs play-chasing

The chasing dog must adopt the goal of being near the chased dog, and the chased dog must adopt the goal of being far away from the chasing dog. How do we determine if these goals, outside of the context of the activity are valuable to the dogs? When they are not chasing each other does the chasing dog want to be close to the chased dog? Does the chased dog want to be far away from the chasing dog? Certainly not, for if

they did value being certain distances away at all times, then they would never stop chasing each other.

One might think that there is a circularity to this reasoning or that it could show that there's almost nothing that dogs value. For example, you could say that dogs don't value food because when they're not pursuing food they don't pursue food. However, in contexts other than when dogs are pursuing food, dogs *would* pursue food if there was food to pursue. In the case of chasing, there are always dogs in the pack to chase, but only when they are chasing do they seem to value "catching" or "evading" other dogs.

#### (n) Dog play-wrestling

Do dogs value pinning dogs to the ground in other contexts? This is actually plausible. It be able to pin a conspecific is a sign of dominance that may have social ramifications, say, in determining the pecking order for mating or determining ranks in the social hierarchy. In this respect, dog wrestling may sometimes be a form of social competition rather than play. However, this isn't always the case. How can we tell? The phenomenon of self-handicapping, which is common but by no means unique to dogs. Dogs will "play down" to their opponents skill or strength level to even the fight. Instances of self-handicapping show that the goal of pinning the other dog is at least momentarily valued less than having a fair fight<sup>13</sup>.

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<sup>13</sup> Moreover, self-handicapping can be seen as a restriction on means. Using *all* of one's strength is prohibited, which makes the means of the activity less able to achieve valuable goals. (Recall the toy



(o) A cat playing with a captured mouse

Often times, before a cat kills and eats its prey, it “plays” with the prey. It releases the injured animal only to scoop it up once more and bat it around. It might appear that this is not play under the theory. By “playing” with the mouse, the cat has the goal of killing it (valuable goal) but it is in no hurry to do so. However, the cat really doesn't have the goal of killing the prey, or at least this goal is not very prominent, for otherwise it would just go ahead and do so.

What goal is required of the cat to be playing with its prey in this manner? It can't be *to catch the mouse* because this is incompatible with the intentional releasing of the mouse that the cat does every so often. It can't be *to release the mouse* because this is incompatible with the intentional catching of the mouse. If the cat is neither required to have the goal of catching the mouse or releasing the mouse, what goal could be required of the cat? Perhaps this is to look at the problem in the wrong way. Perhaps this isn't an instance of valueless-goals play at all but rather inert-means play. What means are prohibited? The cat is prohibited from executing a kill bite to the mouse. If it does use a kill bite, then the activity has ceased. Because the cat is refraining from using a kill bite, the possible goals that are achievable by permitted means are considerably less valuable than the goals possible were there no prohibition. Specifically, the cat is unable to kill and eat the mouse, which are both very valuable to the cat. Thus, this is

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bow and arrow case). Thus, dog-wrestling may be related to two different forms of play prototypes.

play since the cat is limited to relatively inert means in a similar fashion to inert-means exemplars.

### *Concluding Remarks*

We begun our inquiry by looking at how philosophers and biologists approached the problem of defining play. We are now in the position to reflect on these previous views in light of the “active and frivolous” account of play. Let us start with autotelic theories.

For an activity to be autotelic, it must be pursued for intrinsic rather than instrumental reasons. Because of the many instances of autotelic activity that aren't play and the many instances of non-autotelic activity that are, autotelicity is unsuitable as a necessary or sufficient condition for play. However, these theories are not totally misguided. Much play *is* autotelic, and we can explain this by appealing to the fact that its not possible to be typically playing and to have goals that are extrinsically valuable in other contexts. In other words, the goals one must have aren't good *for* anything else, which makes it less probable that play activities would be pursued for the sake of something else rather than for its own sake. This is one reason why play activities are so often autotelic.

Some biologists have claimed that play has a “base emotion”, fun or pleasure. It's not surprising that play is often pleasurable or fun; there must be something

rewarding about the activity itself since its not being pursued for its valuable goals.

Others have claimed that play is simulative or imitative of serious activities. This can be explained by the fact that the valueless ends of play may purposely be chosen because they make possible activities that resemble or simulate serious activities. It has also been claimed that means are stressed over the ends in play, a tendency is easy explained on our account. The ends aren't of any value or don't exist so it's no wonder the means are stressed over the ends.

### CONCLUDING REMARKS

The account proposed in this chapter depends on the notions of active engagement and frivolousness as well as the required goals and means of activities. These features were brought together in the form of necessary and sufficient conditions that define what a typical exemplar of play is. On the basis of similarity to these exemplars, we can make judgments as to whether an activity is play or not. The model has held up against a first wave of objections, albeit from a friendly source, and seems to capture key forms of animal play, which means its import could extend beyond metaphysics and into philosophy of biology.

## CHAPTER 6

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# A philosophy of play

### *Integrating and Expanding*

After forays in the psychology of play, the ethics of play, play and moral development, and the metaphysics of play, we have finally addressed all five of our guiding questions. Having accomplished this, it might be helpful to reflect on how these different pursuits can inform each other and can inform other questions that a philosophy of play should properly cover.

### THE VALUE OF PLAY'S GOALS

With all the talk of valuelessness in chapter 5, it might seem as though I think that people don't care about their play goals. On the contrary, people care very much for, say, scoring more points in a basketball game or reaching the finish line first in a foot race. We get wrapped up in play activities, and we start temporarily valuing ends that we wouldn't in other contexts value. This feature of play can be tied into what was said in chapter 2. Why do we play? The short answer is that there are a number of intrinsic

motivations which can find an outlet through play. For instance, we are motivated to use our capacities, and to seek out novelty and challenge. All of these motivators provide us with reasons to do things that we have no good reason to do. Dogs are motivated to chase their pals; kids are motivated to be heads of imaginary households; grown men are motivated to toss basketballs through hoops. These are instances in which there is an abundance of intrinsic motivation on the ready. Goals that can recruit this motivation receive a temporary boost in perceived importance or value. Whereas it's usually the case that an important goal makes one more motivated; in play an important motivation makes one more goal-directed.

Play taps into excess motivation, and it's because of this excess motivation that we get many of the trademark qualities of play. It provides the energy to make play *active*. It motivates us to pursue valueless goals and to use inert means because doing so may be the best way of stimulating intrinsic motivators. And when the intrinsic motivation is no longer being recruited or if play stops, the perceived value of play goals returns to its normal, valueless level.

### STATUS OF SHAPED PLAY

In Chapter 3, I set forth a variety of arguments for the view that we can have a variety of useful goals for play. It can help us live happier, healthier lives. However, we must consider whether putting play to instrumental purposes undermines its very status as

play. The beneficial ends that we can put to play can either be reasons for us to play, reasons for us to encourage others to play, or goals that we have while we play. In the first two cases, its no challenge to an activity's being considered play. A beneficial effect could be a reason for you to play, but that beneficial effect doesn't need to be a goal of yours *while* you play. Thus, the account we developed doesn't have one of the major flaws that autotelic theories have. For autotelic theories, play activities must be done for their own sake, not for some instrumental reason, which means *using* play is strictly speaking impossible. In any event, even if one does have valuable instrumental goals while playing, it can still be play so long as these goals are not required for partaking in the activity. The only thing that is lost is the possibility of this type of play being a typical exemplar.

## STATUS OF THE ARTS

One of the more interesting questions about play is whether the many great cultural endeavors are in fact play. Are actors *playing* when they put on a Shakespearean "play"? Are musicians in a symphony *playing* when they "play" Beethoven's Ninth? More broadly, should the philosophy of aesthetics be considered a branch of the philosophy of play? With an account of what play is, we're in the position to answer that question. The goal of the actors is to portray a written work, and the goal of the musicians is to produce music. The question is whether the required goals of these activities

are valuable. The answer is of course yes. It's valuable for a theatrical production to be held; it's valuable for a great music to be played. This is evidenced by the fact that people pay good money to see such things, and people devote their lives to be able to produce such things. It's relatively rare for an artist or musician not to value the work that she produces. It may happen when a musician is practicing her craft, but then the goal of practicing is to acquire skills so it is not play. Perhaps a painter who is just doodling or a person who is humming no tune in particular would be considered instances of no-goal play, since these are cases in which there is no goal or the goal is not valued by the "artist" (if we can call her that).

### *A Philosophy of Play*

The work presented in this dissertation attempts to lay a foundation for a naturalistic philosophy of play. Its conclusions depend on the synthesis of disparate strands of research from evolutionary biology, ethology, anthropology, psychology, and of course philosophy. Using this base of knowledge, we were able to glean insights on our guiding questions: Why do we play? Why should we play? How should we play? What's the relationship between play and moral development? What is play? But given the breadth of the topic this work is by no means comprehensive, and given the research left to be done it's by no means definitive. Our guiding questions are not wholly

resolved, but sometimes progress is not a matter of resolution but of seeing what others have seen through a philosophical lens.

Play is one of evolutions greatest gifts. It offers freedom from the necessities of life, and affords the opportunity to fully determine the ends we wish to pursue. It shapes us and we shape it, and the only limits on the future of play is our own ingenuity and creativity. In its complexity, diversity, and frivolousness, play is a rather handsome reflection of the human spirit.



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