

Consequences of Play Deprivation

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To look deeply at play, and to place it in evolutionary, biological, cultural and contemporary context is to partially answer the question, what, really does it mean to be fully human? Or, to state it another way, if play is lost or missing, in a complex changing and demanding world, are there serious negative consequences individually and culturally that affect all who miss out on it? The eminent play scholar, Joe Frost, in his compelling book, “A History of Childhood Play and Play Environments” (1) tellingly shows that the diminution, modification, and/or disappearance of play during the latter twentieth and beginning of the twenty first century is presenting a crisis threatening our societal overall welfare, likely to last for many generations. His approach to understanding play and play deprivation has enlisted very broad and deep historic reviews of childhood play, and are in contrast to my ways of viewing play, which reflect evolutionary, biological and individual life-history clinical-experiential foci on play behavior, with a database from personal interviews built through the retrospective examination of one life at a time. My conclusions therefore have been crafted through these perspectives; nonetheless, the parallels in our differing examinations of play mirror the serious consequences from play deprivation, and each approach warrants inclusion in this play science encyclopedia.

The Status of Play?

Unsupervised playground play and free-for-all street play like kick the can and stick ball are diminishing to becoming non-existent. Pick up games are virtually gone, as are the vacant lots and open time and roaming neighborhood kids that spawned them. Recesses have been cancelled countrywide. Joyless US teaching to the test, with ever increasing heavy homework demands as by-products of the NCLB (no child left behind) as the prevailing elementary middle and high school educational policy is mainstream. Childhood depression is more prevalent. The obesity epidemic is seen in all developed countries. Playtime outside has decreased by 71% in one generation in both the US and the UK. Kids are deeply involved in the technologically

oriented screen and cell-phone dominated virtual world which has replaced historically vital kid-organized varieties of play. Middle-class parental supervision of their offsprings' after school hours is the norm. College admission policies that require advanced academic (honors) courses, and impression producing extracurricular activities necessitating bulging resume's for consideration as entry requirements is pervasive. Both parents are in the workforce, with longer work hours and diminishing vacation times. Economic stress and vocational insecurity has become taken for granted. The level of work satisfaction for mainstream middle class adults has diminished. Intergenerational play and "family" games are in decline. Poverty and inaccessible play opportunities associated with high crime rates, gang membership. have become endemic in inner cities.

Though a complex mix, this list and much more that could be added identifies mainstream cultural evidence that time provided for safe unsupervised free play for children, and open unstructured playtime for adults has diminished radically in the past 50 years. But does this constitute a worrisome public health crisis linked to play deprivation? By looking closely at the consequences of play deprivation and offering broad based opportunities for remediation, promises for improved societal [well-being](#) honoring what nature has designed into the fabric of our biology are primed for re-entry into contemporary life.

Play is Necessary: Deprivation Needs to be Addressed

The urge to play is embedded within all humans, and has been generated and refined by nature for over one hundred million years. With the flood of information from many disciplines it is now possible to specify and integrate many of play behavior's contributions to overall human development and long-term survival. Where tradition has often relegated play as non-essential or at least a very elective human luxury, that general cultural misperception is no longer viable. In this essay, the focus will not be on what is being discovered and validated as the benefits of play, such as self regulation, curiosity, increased perseverance, progressive mastery and optimism, but the emphasis will be on the effects of play deprivation.

Lifetime Review and Data Supporting the Consequences of Play Deprivation

Severe sustained human play deprivation, based on the author's systematic research into the life histories of homicidal males and felony drunken drivers as compared with closely matched comparison populations provided evidence in the late 1960's for more extensive exploration of the nature and importance of play behavior. It also provided fuel for the hypothesis that major prolonged sustained play deprivation has major dire consequences for human competency and well-being, and was associated with, and potentially causally linked to these felons' individually analyzed predilection for violent antisocial criminal activities.

This research triggered the author's 45-year continuing odyssey and exploration of the nature and importance of play. As a clinician, between 1968 and the present, (2013) the author has conducted or reviewed approximately six thousand individually conducted detailed play histories. These interviews have produced many anecdotal contrasts separating play adequacy outcomes from those who have experienced serious play deficiencies. Though this long term clinically conducted one on one interpersonal professionally organized review is not sufficiently rigorous for statistical analyses, nonetheless, as its findings are integrated with the currently expanding basic science objective animal play-related information, the volume of anecdotal information allows credible hypotheses regarding the long-term effects of major play deficiency to be reasonably sustained. (2-9) Additional field observations of animal play in the wild, and the establishment of colleague relationships with many animal and other distinguished play scholars, have added breadth and depth to the spectrum of information about play behavior, and allow credible conclusions about the effects of play deprivation to be described.

Generalizations from Thousands of Play Reviews

Generalizations gleaned from the many clinical play history reviews are as follows. Sustained, moderate to severe play deprivation particularly during the first 10 years of life appeared linked to major varied but virtually omnipresent emotional dysregulation; i.e.,

increased prevalence of depression, a tendency to become mired in rigid inflexible perceptions of options available for adaptation, diminished impulse control, less self regulation, increased addictive predilection, diminished management of aggression, and fragility and shallowness of enduring interpersonal relationships. The prevalence of these dysfunctions was markedly higher in those with moderate to severe deprivation than in those whose histories demonstrated sustained healthy play patterns throughout life. When stressed, the play deficient individuals generally became mood-driven, and lacked the play-derived experiential alternatives to relieve their emotionally driven behaviors. Those with play sufficient backgrounds tended to manage their stressful circumstances with a much greater repertoire of adaptive choices, and mastered them, rather than succumbing to isolating, self-defeating maladaptive, violent or antisocial dysfunctional solutions. Thus these impressions acquired over many years, and from interviewees from virtually all walks of life demonstrated that healthy play patterns appeared linked to personal vitality, resilience, optimism and well being, and that those with major sustained play deficiencies lacked these adaptive capabilities. Thus the histories of severe play deprivation revealed major deficits in social, bodily and emotional regulation that support the necessity of play experiences to learn and sustain cooperative empathic social capacities as well as provide experiences leading to improved resiliency, good stress management, curiosity and other adaptive capabilities. These play-based skills appeared to aid the players to effectively deal with an inevitably challenging and changing world. Mild to moderate play deficiencies tended to be associated with lessened adaptive capabilities, more proneness to fixed defensive behaviors, and increased prevalence of interpersonal difficulties in finding and sustaining long term intimacy. The capacities for sustaining communal harmony, ease of developing cooperative or altruistic behaviors were lacking in the severely play deprived. These findings remain ready for more specific elaboration and validation by ongoing well-designed longitudinal research, which, to my knowledge is not being conducted anywhere. I recognize the limitations of my personally conducted reviews, and I cannot unequivocally state that direct correlation or specific causal linkages are warranted between deprivation and broad based emotional and social dysregulation; however, the generalizations from the sheer volume of reviews seem valid, and have stood the test of time.

Toward a Basic Science of Play and Play Deprivation

As objective animal play data has become available, the parallels between the fragile socialization of play deprived social mammals whose absence of “normal” play behavior has been managed in research settings, and the socialization deficits generalized from reviews of the play-deprived humans is plausible.

As Jaak Panksepp writes in *The Archaeology of the Mind*, (10) “A rigorous scientific approach to play reveals that all mammals possess a fundamental **brain** system, PLAY, which accounts for the universal inclination to play. Current research suggests that the PLAY system may be especially important in the epigenetic development and maturation of the neocortex....the universal recognition of every child’s need to play may help shape wise social and educational policies in the future.”

This fundamental brain system has been demonstrated in rats and by similar anatomy in other social mammals, to be anatomically subcortical in its circuitry, demonstrating both its ancient survival based functions, as well as more recently being identified (Burgdorf) (11) as priming a wide array of prefrontal cortical genes that foster cortical synaptogenesis. The behavioral evidence of deleterious effects of play deprivation, and the positive effects of adequate rat play reinforce the anatomically favorable results of healthy play on crucial areas of the cortex. It is speculative, but reasonable, I believe, to link the deficits seen in play deprived laboratory manipulated rats with deprivationally driven socialization difficulties in other species, including our own

The careful analysis of function that carries beyond play-induced brain size or localized gross changes in brain areas however, requires, in addition, a finer level of analysis. Namely, at the level of the structure of the cells themselves; assays of the chemicals they release (such as dopamine, brain derived neurotropic factor, endocannabinoids, opiates and IGF-1) the presence or absence of selective other neurotransmitters and neurohormones that effect **neuronal** functions need to be more fully known in order to reveal more precisely how play experiences can influence brain development, functioning and ongoing lifetime plasticity. The burgeoning evidence from the basic science of play behavior as revealed through careful play manipulations does however, shine like a beacon revealing

patterns not before seen, and points to the capacity of play to foster greater adaptive capacities, not seen in the play deprived. The flood of [neuroimaging](#) and other developing non-invasive technologies offers promise of more precise framing of the nature and importance of play behaviors.

Speculations

The deprivation of rat [rough and tumble play](#), and the resultant difficulties such play deprived rats have in becoming functional adult rats within their species socialization requirements has been well documented (and referred to elsewhere in this encyclopedia) by the research elegance of Sergio and Vivien Pellis as well as that of Einon and Potegal. The jump from rat rough and tumble play to human rough and tumble play is too far to bridge scientifically. However, I am intrigued that rats deprived of rough and tumble play do not possess the social skills to integrate appropriate from inappropriate aggression. As a clinician reviewing incarcerated young male murderers I noted that none of them in their self-reporting or from family recollections remembered “normal” playground rough and tumble play. Isolation, bullying, inappropriately acted out aggression were their “play” patterns.

Conclusions

The hypothesis of play deprivation in humans leading to serious socialization deficits and more has, based on a wide variety of evidence, increasing credence. The boundaries of play science are expanding, and as they do, the survival drive status and importance of PLAY will become more and more evident, and integrated into public [consciousness](#) and policy.

To see PLAY as a survival drive, and to have been involved as a long-term observer of both its beneficial [rewards](#) and the often dire consequences of its severe deprivation has altered my world view. The daily evidence of a lack of basic play hygiene that is endemic in Western culture frames many of the overall socialization deficits that are individual and societal.

I have learned from others, and discovered for myself that our species has a long natural history where play has sustained its presence by fostering deep engagement in the vitality of living one’s life from

within, and matching it to the opportunities and realities of the environment. To miss it is to miss the harvest of a well-lived life. Thus it contributes as part of its essential benefits to trust, empathy, sharing, cooperation, personal resiliency, self-regulation, sustained optimism, and more, despite real world challenges that suppress limit its presence.

Knowledge of play deprivation, when it becomes integrated into a social value system allows a more positive way of solving major societal challenges. For example, a good look at contemporary Congressional gridlock (as compared to more convivial times) demonstrates the lack of using play principles to promote compromise and cooperation. The resultant fixed non-adaptive adversarial morass that now seems endless can be illuminated by play science. Rigidity in outlook, fixed ideologies, are frequently symptoms of play deprivation. Innovativeness, good humor, irony and not taking oneself too seriously are by-products of a playful heritage. A review of parenting practices that diminish autonomy and self directed play, promote narcissism and lessen empathy and the long-term outcomes for children so raised (as seen in many of the play reviews I have conducted) supports the conclusion that the benefits of play have been missing in these lives, with negative consequences. In many play insufficient adult lives, accomplishments such as economic adequacy tinged with chronic depression may well be the long-term outcome. At the far end of serious major play deprivation, a review of the mass murderers who have either been grievance killers, or potentially those with a psychotic core, has, in the majority, demonstrated that healthy play was seriously missing in their lives. This is not to diminish the contributions of other factors such as abuse, humiliation, availability of weaponry, etc. as factors in these heinous crimes, but the evidence as I have reviewed it does demonstrate the absence of healthy play experiences in the backgrounds of these tragic perpetrators. Early identification of play deficiencies and remediation might well have altered their (and future killers) march toward tragedy.

But what of those whose lives have been overwhelmed by the demands of contemporary responsibilities, and who would enjoy more play, have a personal history of healthy childhood play, but now just can't seem to find time for it? The consequences of prolonged personal adult play deficiencies are privately evident and have been shared repeatedly in my reviews. Though early play may have been

their heritage, the consequences of adult play deprivation are: lack of vital life engagement; diminished optimism; stuck-in-a-rut feeling about life with little curiosity or exploratory imagination to alter their situation; predilection to escapist temporary fixes...alcohol, excessive exercise, (or other compulsions); a personal sense of being life's victim rather than life's conqueror.

At any age, assessment of play adequacy and the recognition of its deficiency, along with the provision of the conditions necessary for its sustenance are basic requirements for health, wellness and full expression of what it means to be human.

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