

# Why look at toy animals? Play, protopolitics, and the postnatural

## Abstract

This article addresses the toy as a neglected cultural and technical object. The toy is neither tool nor ritual object, and its animation in children's imaginative play suggests alternative perspectives on the history and lived experience of material and technological artefacts. The concept of protopolitics is advanced to explore the implications for cultural politics of the ambiguous articulation of power relationships in play. The article takes the long history of the toy animal as a case study, drawing attention to its creaturely-artificial facets that go beyond, or more accurately *precede*, familiar cultural-political binaries of authentic and inauthentic, depth and surface, knowledge and illusion, truth and lies, belief and fetishism, human and nonhuman, natural and synthetic. These other facets include dynamics of the technics of imagination, and their ambivalent articulation of relationships of control, training, care, violence, and love – a protopolitics evident in imaginative play. And, in postnatural media culture, the toy animal has migrated to digital habitats, offering an alternative animal perspective on questions of artificial intelligence. The child's toy and media environment is playfully zoomorphic, populated with artificial animals, from toys and stories to virtual pets and videogame characters, a new simulacral and postnatural trajectory in the descendance of the artificial animal and its playful and play-like behaviours.

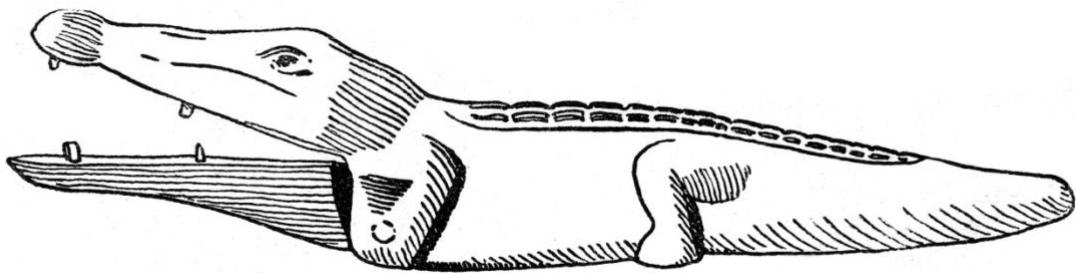
## Keywords

Technology, play, toys, animals, the postnatural, protopolitics

## Introduction: Toy technics

The toy occupies an ambiguous position in histories and genealogies of material, consumer, and techno-culture – where it appears at all. As an object for children's amusement, it falls below the horizon of critical thinking on culture as an implicitly adult domain, and when studied as children's culture it appears often as an object of concern and suspicion: either an ideological message to the child from the adult world, particularly of gender roles, or an ever more commercialised and commodified colonisation of children's everyday lives and imaginative play through media characters and licensed storyworlds. As a commercial product, its material and technical properties are subsumed by the generalised category of the commodity fetish: insubstantial, novel, artificial, and illusory. However, it predates consumer capitalism by millennia, and in its form and modes of use--non-instrumental, intensely symbolic, and often seriously playful--evoke ritual objects. Often mechanical, the toy is a technical device, but one with no productive or instrumental use, not a *tool* as commonly understood.

Its etymology and connotations reflect this ambivalent and simulacral status: novelties, trifles, bagatelles, copies of – or models for – more substantial and authentic objects, bodies and environments. In French, the *jouet* is a ‘plaything,’ whereas the German *spielzeug* could be translated as ‘play-thing’ or ‘play-stuff.’ ‘Stuff,’ then, could suggest the base or formless, the low-value and trivial, but also, as Kevin Schut suggests, a material with the potential for fabrication and shaping, something with the potential for play (Schut 2014: 229). Within theories and histories of play, the toy is similarly peripheral and intangible. The word appears only once in each of *Homo Ludens* (Huizinga 1986), and *Man, Play and Games* (Caillois 2001), and, while studies of toy play feature more consistently in educational, anthropological, and developmental studies of play, the toy itself is rarely addressed as a distinct symbolic or technical artefact. In recent years, the study of digital games, media, and transmedia have begun to explore ontological questions of play and toys such as dolls and LEGO as they move between the actual and the virtual (Bruin-Molé 2018, Giddings 2007, Reay 2021, Sicart 2014, Taylor and Ingraham 2020, Wolf 2014).



*Toy crocodiles with articulated jaws.*

*Top: Egypt c.2500BCE (Science History Images / Alamy stock photo);*

*Bottom: Playmobil c. 2005CE (photo: Dave Gibbons)*

Where the toy does appear in work on technology and culture—for instance in the rich literature on eighteenth century automata, or on the long history of optical toys from which cinema individuated at the end of the nineteenth century (an important exception here is Bak 2020)—the toy itself as a distinct category of artefact tends to be downplayed in the attention to the philosophical and technical dispotifs it engendered. I have proposed elsewhere a thought experiment in which the toy rather than the tool is taken as the primal technical and cultural primogenitor, evident in animal technics as well as early human activities (Giddings

forthcoming). From this perspective, the toy as technical object articulates the infant and child subject with their material and cultural environment, a process that ripples out to technoculture at large over time (Winnicott 2005). Speaking broadly, different categories of toy offer different modes of such articulation. Play with mechanical dolls animates cosmologies of the human body, its deportment and performance both over millennia and in highly contingent moments of the everyday; the modern construction toy offers the simulacral modelling of new architectonic realities; and the toy soldier has been instrumental in both the rational and fantastical simulation of warfare and logistics from the Napoleonic era to the contemporary military-entertainment-industrial complex. In this article I will suggest an ethology of the toy animal in particular, drawing attention to its creaturely-artificial facets that go beyond, or more accurately *precede*, familiar cultural-political binaries of authentic and inauthentic, depth and surface, knowledge and illusion, truth and lies, belief and fetishism, human and nonhuman, natural and synthetic. These other facets include dynamics of the technics of imagination, and their ambivalent articulation of relationships of control, training, care, violence, and love – a protopolitics evident in imaginative play. And, in contemporary media culture, the toy animal has migrated to digital habitats, offering an alternative animal perspective on questions of artificial intelligence. The child's toy and media environment is playfully zoomorphic, populated with artificial animals, from toys and stories to virtual pets and videogame characters, a new simulacral and postnatural trajectory in the descendance of the artificial animal and its playful and play-like behaviours.

Toy animals are among the earliest artefacts in the archaeological record, and appear to be at least as old as human-shaped figures. The earliest animal figurines discovered date from 30,000 BCE in Ice Age Europe, for example a carved ivory mammoth less than four centimetres long, uncovered in a cave in what is now Germany in 2007 (<https://www.world-archaeology.com/world/europe/germany/prehistoric-figurines-from-swabian-jura/>). A figure of a bird, again tiny at less than two centimetres in length, carved from burnt bone and carefully designed with an overlarge tail to balance it, and among the oldest Chinese artefacts found, dated to over 13,000 years ago. Animal-shaped artefacts – as toys, ornaments or ritual objects (or combinations of these functions) appear to be universal in human civilisation. Today, children's books and media are full of anthropomorphic animals and animated animal toys, but they attract little of the metaphysical attention afforded to anthropomorphic dolls. When dolls and puppets come to life in children's and adult fiction it is with all the pathos of the desire to be sentient and biological, whereas the life of toy animals is generally unexamined, as they adopt the non-reflective, non-existential role of the child's companion (Kuznets 1994). Alternatively, they may appear as one of a community of living toys of various types, as in, for example, Enid Blyton's *Noddy* books, or the Pixar *Toy Story* films. Similarly, whilst animal-shaped machines are integral to the genealogy of automata, they tend not to have elicited philosophical reflection on the nature of consciousness and reason as did their android kin, rather they have occupied more ambiguous conceptual and symbolic roles. The bird-shaped parerga ornamenting classical and medieval devices visually and aurally, Leonardo da Vinci's lost automated lion, and Jacques de Vaucanson's digesting and excreting mechanical duck gather to themselves something of the technical magic of the android, but to the manifestation of corporeal rather than cognitive life, driven by simulated

instinct rather than consciousness or reason. Today, animal-inspired robots and software systems model instinctive, social and 'swarm' behaviours, roaming the edges of critical and speculative thought on machine intelligence and consciousness (Parikka 2010). Videogame worlds are full of synthetic creatures for players to nurture and train, fight, or eat (Tyler 2022). Playful artificial animals offer rich possibilities for thinking and new modes of animate behaviour and human-nonhuman relationality, not least because they highlight beastly attributes repressed in the anthropocentric automata and writing on them, attributes such as herd or swarm behaviour, predation, being trained or nurtured, and evolution (Giddings 2020).

### **Synthetic wilderness**

The prehistory and history of toy animals is inflected by economic, social, and industrial shifts. In recent centuries the German toy industry mass-produced animals from wood, ceramic, and textiles. New plastic materials were introduced in Britain and the US in the twentieth century and cheap zoo and farm sets produced, and Disney innovated with media tie-ins and merchandising - a process ramped up significantly in the post-War period with commercial children's television. Brian Sutton-Smith's proposition that twentieth century toys were a kind of generational apology to children for the loss of their outdoor social lives and their increasing domestication and privatisation holds true with the toy animal as artificial companion (teddy bears and other cuddly toys), as models of environments (zoo, farm, circus train, and safari sets), and as didactic and instructional media (stacking blocks and illustrated books depicting alphabetic bestiaries from Aardvark to Zebra) (Sutton-Smith 1986). As such, the animal-like play object suggests another distinct aspect of this amelioration of loss: that of Nature in general and close contact with actual animals in particular. The workshops and factories that turned out artificial animals and animal media were integral to the seismic social and demographic shifts of industrialisation and urbanisation that largely separated - for the first time in human existence - animals from the everyday lives of a large proportion of the population. By the inter-war years of the twentieth century even horses had largely left the city streets of Europe and North America as motorised transport took over, the urban animal's role transformed to that of domestic pet, exhibit in the new zoological gardens, or as toys and children's media.

These modern toy animals and zoomorphic media characters are peculiarly animate creatures. Though talking animals with human-like intelligence are evident throughout myth, fable, religious texts and magical thinking and practices, literature and commercial media for children since the mid-nineteenth century are marked by a new phantasmic intensity. Lois Kuznets argues that the first interaction of human and nonhuman animal characters "at the same level of "fictive reality"" doesn't occur until the adventures of Lewis Carroll's Alice with the White Rabbit, Cheshire Cat and Caterpillar in the 1860s (Kuznets 1994: 138-139). We might add the sometimes unsettling mix of human and animal behaviour in Beatrix Potter's characters at the end of the nineteenth century and Walt Disney's *Silly Symphonies* cartoons of the 1930s that conjured up a chaotic world of human-like animals and zany

technology. With industrialisation, everyday experience with animals became predominantly artificial and mediated, and toys and the toy-like took over. Elena Passarello links the domestic environment of her childhood - stuffed with animal-themed and decorated books, clothes, furniture, media and objects - to John Berger's mournful diagnosis in *Why Look at Animals?* (Berger 1980) of the modern urban experience as one of alienation from nature, with animals tamed as pets, constrained in zoos, or disseminated as media imagery. Passarello shares Berger's sense of loss, but her description of her animal-themed childhood - "a synthetic wilderness" - conveys a semiotic, developmental and imaginative richness that suggests there is more to the everyday postnatural than simply a faint and cruel compensation:

According to my Peter Rabbit baby book, the first song I could sing was "Old MacDonald," and I knew the word "kitty" by the end of my first year. For my birthday, Mom baked a chocolate cake in the shape of a cat with uncooked spaghetti in the icing (for whiskers). By then, I'd tell any interested party what the kitty said, what the doggie said, even what the fishy said. In my crib at night, I watched a mobile of padded quadrupeds spin to "Farmer in the Dell." My green bikini top was shaped into a pair of googly-eyed frogs, I wore a brown-checked dress covered with bespectacled owls to meet Santa Claus, and I was given for Easter a stuffed rabbit in a pink pinafore—my best friend, Tammy—that I rarely let go of through kindergarten (Passarello 2017: 175-6).

I'm using the term 'postnatural' here in a manner analogous to the 'posthuman' of critical posthumanism. That is, it does not assume the end of the biosphere, rather it signals an emerging environment of biotechnology, catastrophic climate change and (as in this article) prevalent artificial systems and entities that are natural-like in their affectual and experiential dimensions and that fundamentally challenge established distinctions between the natural and the artificial. On the other hand, it acknowledges that human existence has always been predicated on the technical manipulation of the natural environment and, for at least 28,500 years, on the domestication, and hence engineering, of animals. To adapt Bruno Latour's famous phrase on modernity: We have never been natural.

Since Berger's essay, written in the mid-1970s, the status of the animal and the natural environment has taken on a new urgency, with the ambiguous promises of genetic engineering and cloning, and the distinctly unambiguous threats of the climate crisis, loss of habitat and consequent mass extinction. From this perspective an insistence here on the 'animalness' of zoomorphic artefacts, images and machines might seem perverse: to assert that whilst artificial animals are not animals, they are not *not* animals a blithe collusion in the anthropogenic destruction of the zoosphere (I should note that this is a rhetorical device I have borrowed from Gregory Bateson, and it is a distinctly toy-like one: for Bateson, a baby doll is not a baby, but it not *not* a baby). But toys and play objects suggest otherwise: in the long history of animal toys and media, the distinction between a pre-industrial life with actual animals and a postindustrial life with artificial animals and pets is far from clear cut. The presence of graphic and plastic depictions of animals throughout organised human existence,

culture, religion and play at the very least suggests that an everyday life with zoomorphic simulacra is not only a late modern phenomenon. This brings us to the question of what the status of an artificial animal is.

### **Why look at toy animals?**

The artificial animal seems to have always been part of children's lives. At all times adults have fashioned, and children played with, small animal-shaped objects. While it is often hard to ascertain whether some stone age carvings of animals are ritual objects, ornaments or toys proper, given the anthropological insights that in preindustrial societies all such objects have the potential to move between these uses, it is safe to assume that many would have been played with. As Antonia Fraser tentatively suggests, “some of these animals may be ornaments rather than toys, but it is surely permissible to see in at least some of these figures a natural corollary to a child's love of pets - perhaps see these figurines [as] half way between toy and decoration” (Fraser 1966: 26). Animal-shaped toys have been found in Ancient children's graves, suggesting loved playthings rather than ritual objects. More speculatively, the tiny scale of many early figurines also hints at uses that are neither ornamental, ritual or practical: these could be objects to be held, collected, and treasured, hidden maybe - with the sense of the intimate and secret that would characterise the aesthetic of the miniature millennia later.

The earliest surviving animal figurines are often carved from ivory or bone—animal shapes in animal materials—in a primal synecdochical craft the significance of which at the very least indicates the integration of human and animal lives from the imaginary and symbolic to the material necessities of survival. Fraser suggests that the prevalence of particular types of animal in the archaeological record of toys and toy-like ornaments tends to reflect that animal's economic as well as symbolic significance for the culture: painted wooden or baked clay cows for Egypt, horses for North American peoples, and also for feudal Europe (Fraser 1966: 26-27). Some Greek horses and dogs have moulded or added panniers, emphasising the working relationships of travel and trade between human and animal (Fraser 1966: 52). I would note here too the technocultural variety of the horse in these examples: respectively agrarian (found along with model cattle), transportational (for nomadic peoples) and martial (usually with armour and mounted warrior or knight). Interestingly, the toy versions of medieval knights and horses were often in the form of the *ludic* dimensions of the feudal war-machine: jousting and tournaments. This said, it appears that all animals present in any particular people's environment have the potential to be rendered in ornamental and toy form, not only those of economic or technical significance, from vermin (a glazed composite mouse from XIIIth Dynasty Egypt in 2000 BCE (Fraser 1966: 24) to predators (lions, wolves, bears, etc.). Bird-shaped artefacts in particular seem near-universal, and are often distinctly toy-like. They are, as Fraser puts it an “archetypal shape of the toy world,” due in part, she implies, to the simplicity of the bird form lending itself to an economy of manufacture: “the bird family of toys springs in essence from an egg shape with a head and tail added” (Fraser 1966: 30). The crafting of birds as ornaments and playful devices ranges from musical instruments from

Mayan whistles to Greek pneumatic automata; Hopewell (Ohio) tobacco pipes to Central European folk-art animated pecking bird devices that were still being made in the 1960s (Fraser, 1966: 35). Nightingale-shaped clay whistles remarkably similar in form to pre-Columbian Mayan ones, were sold in early fifteenth century French markets (Fraser 1966: 63).

Animal toys offer a much wider and more ingenious set of mechanical characteristics and modes of animation than the simple jointed legs of archaic dolls. Wooden tigers and crocodiles from around 1100 BCE Egypt were constructed with jointed jaws, sometimes worked with strings. Wheeled animals also often incorporate string mechanics, across the globe, and across millennia - even if the string doesn't survive, holes in the horses' noses indicate the pull-along mechanism. Wheeled toys themselves have modelled animal-vehicle assemblages accurately (horses pulling chariots and carts), fantastically (an Egyptian limestone toy of an ape driving a chariot or a fifth century BCE terracotta figure of a man riding a goose) (Fraser 1966: 28), or in the form of impossible assemblages: animals with wheels instead of legs - or where the horses appear to be *in* the chariot, animal and vehicle condensed into one wheeled body, such as an Athenian clay chariot with large wheels illustrated in Fraser (1966: 46). This latter is a body-machine monstrous if taken literally, but in its toyetic mechanical economy the technical imperative abstracts and hence negates the mimetic impulse - a pure example of a toyetic simulacrum.

Alongside artefactual animals, human culture has developed or engineered the animal as technology. Contemporary pets are the product of intense breeding techniques and cultural-technical conventions of pedigree to accentuate both aesthetic and affective traits, not least the production of 'miniature' and 'toy' breeds. Through millennia of breeding practices domestic animals have been invented, speciated, trained and husbanded as resource for meat, milk, eggs, feathers, hide and bone, and as working machines for ploughing, haulage and hunting. Whilst the 'pet' in its current commercialised and domestically-privatised form is a product of the historical moment of industrial urbanisation, the selection of some species and individuals as loved and loving companion animals seems deep-seated - whether the adult hunter's favourite dog or perhaps the nurturing of particular lambs or calves. The prevalence and value of cats in Ancient Egypt is well-documented, and Fraser notes that Greek and Roman children were "enthusiastic keepers of pets" (Fraser 1966: 47). The fact that these pet-nurturing children also had access to a wide range of animal toys, from horses to deer, cattle, sheep, goats, rabbits and domestic birds, is intriguing, suggesting that even in Ancient childhood the distinction between actual and artificial animals was not absolute. Jen Wrye has argued that there is no essential 'petness' to human-companion animal relationships, indeed that the investment of care and emotional attention to the nonhuman extends to inanimate or nonsentient entities (including virtual animals) (Wrye 2009).

## **Play & protopolitics**

What then are the implications of this insistence on the entanglement of the toy, the animal and the technological for studying the cultural politics of both contemporary children's play and the everyday postnatural? I would argue that before we address any particular representational and narrative modes of children's media and artefacts, and their acculturating or ideological operations, we should pay attention to the peculiar semiotic workings of imaginative play in itself, and its predication in, and articulation with, the materiality of toys and playing bodies. For Brian Sutton-Smith, children's imaginative play is characterised by a phantasmagorical, often topsy-turvy animation of their world, the adult world as it appears to them, relationships and behaviours.

Children's play fantasies are [...] meant to fabricate another world that lives alongside the first one and carries its own kind of life, a life often much more emotionally vivid than mundane reality (Sutton-Smith 1997: 158).

Sometimes this other world seems to the adult observer to invert power relationships, with children or animals taking control or breaking free into fantastical scenarios, at other times it seems to be complicit or double down on existing 'mundane reality.' Yet, in play, these are not opposites as they would be in critical theories of adult media consumption – the distinction between 'dominant' and 'oppositional' readings or responses offers little analytical or political purchase. Children often do play against the prescribed narrative and symbolic framing of particular mediatised toys, but play in congruence with this framing is no less imaginative and creative (and no more formulaic and repetitive). As feminist work on Barbie doll play for instance has demonstrated, girls may subvert and invert Barbie's clean-cut professional persona and disposition towards fashion and cosmetics. As Helen S. Schwartz notes,

We know from personal experience and anecdotal evidence that girls dressed Barbie dolls up and sent them out shopping, but we also know that other girls (or even the same girls at different moments) pretended that their Barbies were prostitutes, daring spies, or suicidal icons of the order of Marilyn Monroe, to be buried in the back yard (Schwartz 1997: 50).

Play with soft toy animals can be similarly ambivalent, with the child's psychic and imaginative concerns pursued through the response to and manipulation of material and technical form – cherishing and destructive. As Emma Reay puts it, play with cuddly toys is characterised by a 'hug/harm' dichotomy, their very softness inviting "deformation and aggression" (Reay 202: 142). These observations demonstrate on the one hand that making assumptions about the ideological and behavioural effects of children's media and toy culture through reading off narrative and symbolic framings of the products' packaging and form is an unhelpful method at best. And on the other, it suggests that imaginative play – in Schwartz's account above for example, the performance of retail or espionage – are part of a phantasmagoric continuum, irreducible to reassuring binaries between consumption and resistance, or between symbolic violence and the performance of love. Imaginative play, then, is characterised by a protopolitics, a dynamic and nonlinear flow of embodied ideas, images, behaviours and performances, in which activity and passivity, performing and being



acted-upon, objects and subjects, are generated, circulate and mutate, without ever condensing into phenomena amenable to straightforward cultural-political judgement and diagnosis. The mobilisation in and as play of relationships of control and passivity, of playing by the rules and resisting, distorting or simply ignoring them, of social hierarchies that might be inverted or reinforced in any particular game presents a dreamlike fluidity of power relationships that is not immediately recuperated by or reducible to either a compliance to social norms and hierarchies, nor to an ideal protean resistance of the imagination to these same norms and hierarchies. What the protopolitics of imaginative play, including toy play, do signify is a mobilisation of imagination, material, objects, environments and sociality (Giddings 2014).

### **The protopolitical economy of Noah's Ark**



*Top: teddy bear, UK, 1960s (Photo: Dave Gibbons);*

*Bottom: Noah's Ark, England, c.1810 (© Victoria & Albert Museum, London)*

As mentioned above, different types of toy have the tendency to spawn distinct modes of material-semiotic play. Toy animal play, then, suggests a particular set of protopolitical dynamics, dynamics generated in part from the interplay of toys' symbolic, economic, and technical form. To illustrate this, I will compare two familiar animal toys: the teddy bear and the Noah's Ark set. Each has its own history of invention and industrial manufacture, each has its own social framing and set of assumptions about its modes of play. The teddy bear is

the product of the turn-of-the-twentieth century commercial toy industry in the United States and Germany. With a soft covering and pliable stuffing, and scaled to held to the body by the child's arms, it has come to figure as the archetype of the toy as evocative object, a singular cherished companion for infants and young children (Gleason 2011), and one that promises to afford, according to the Early Learning Centre, 'a perfect way to introduce little ones to care and empathy' (Early Learning Centre <https://www.elc.co.uk/c/animals>). Indeed, as a mascot for children's charities and a cliché of news photography of disaster and war, it is often presented as a synecdoche for toys as a whole, and as a metonym for a modern, romantic notion of childhood as innocent, but under threat. Against the singular teddy then, the Noah's Ark is a *set*. It is the ancestor of contemporary popular animal sets, such as wooden or plastic zoos, farms, dinosaur sets, and circus trains, and is much older than the teddy bear. Noah's Ark sets, and Nativity tableaux to which they are closely related, date from the late Middle Ages and Renaissance. Nativity creches featured large numbers of animal attendants, with one fifteenth century Neapolitan scene including, along with the Holy Family, angels and shepherds, "twelve sheep, two dogs, four trees and an ox and an ass" (Fraser 1966: 71). Noah's Ark sets were a central early product of the German toy industry from the sixteenth century, illustrating the Biblical story of the Flood, and constituted of varying numbers of paired animals, from small collections to near encyclopaedic catalogues of known species. For Dan Fleming, the Noah's Ark was the "...clearest relay point linking the 25,000-year-old miniature mammoth to sixteenth century German wood-carvers and the Britains plastic 'Zoo' range for the twentieth century" (Fleming 1996: 85). The multiple form of these toys demanded specialised modes of production, to the extent that they became known to German toy makers as 'misery beasts,' due to the amount of intricate and repetitive wood-carving work they required (Kerrison 2020).

On one level then, these two toy animal types are distinguished by a simple quantitative technics and economics: one object versus many, the individual or the set. This distinction can be traced back to antiquity and prehistory, and across other types of toy. Human-shaped toys such as dolls and soldiers, and their modes of play, are constituted in part by this fundamental material distinction. As well as the base fact of their quantitative difference, their significance and deployment in play is marked by very different imaginative and affective operabilities - and this distinction is at least as significant in animal-like toys. Against the 'evocative' fabric bears, the multiple miniature dolls, soldiers, and creatures are token-like in that they function mainly in the playful practices of accumulation and collection, arrangement and cultural practices and sites of organisation (in dolls' houses, battlefields, or domestic herds and flocks, with toy fences, barns and trains).

The Noah's Ark was popular with well-off British Victorian families. It was generally only brought out on Sundays, and was the only toy permitted on the Sabbath, due to its clear Biblical and moral reference. In eighteenth century Puritan America, it was one of the few toys permitted for children at all (Fraser, 1966, 90). An article about a set in Winterbourne House in the West Midlands of England, bought in the 1870s, notes that the inclusion of animals such as tigers, elephants and polar bears echoed the contemporaneous fashion for importing exotic animals as pets and for menageries - proto-zoos closely connected with the

culture and practices of the cabinets of curiosity (from which, in turn, dolls' houses emerged). They often included stuffed and mounted heads of exotic animals, along with eye-catching shells and horns displaying the collectors' sense of worldly interest, wealth and celebrating Empire through animal tokens (Kerrison 2020).

Very little critical or descriptive attention is currently paid to the intimate, moment-by-moment, behaviours of children and toys in play, and there is next to nothing recorded of historic children's play. Practically all our understanding is derived from adult memories of childhood, partial and transitory attention, and assumptions derived from detached analysis of toy and media symbols and narrative framing. We can guess that much children's play with teddy bears over the past century or so has been at least partially determined by the toy's technical and material form: it can be a confidante, a companion, maybe one of a small set of other figures, similar in scale, it can be loved and cherished, thrown around and abused, given a name and a personality, perhaps dressed up. The Noah's Ark on the other hand suggests a play of arrangement and deployment, of combination and perhaps more complicated relationships. We can only speculate as to the salience of its religious and moral frame, but surely children spun too their own profane animal worlds and dramas from the little wooden figures and their boat-home.

### **An ethology of the postanimal**

If the injection moulded farm, zoo and dinosaur sets (like the soldiers next to them on the dime store shelf) greatly expanded the riches of the multiple toy for children, then videogames and digital playgrounds offered a new general economy of plenitude. *Pokémon* games, *Zoo Tycoon*, *Hungry Babies*, *Nintendogs*, *Club Penguin*, and *Neopets* promise the endless collection and accumulation of species, herds and flocks. The restrictions now are not those of material cost and floor space but artificially imposed rules for gameplay challenge and (in the online and mobile games) the commercial management of attention and engineering of microtransactions. This postnatural cornucopia suggests a postdigital retrospection on the character of quantity in toys and toy-like media: the endless duplication or spawning of virtual animals in videogames draws attention to the material value and significance of predigital animal toys. These packs, flocks, herds and schools are evidence of a persistent cultural logic of the multiple, the token, the mass produced and standardised over the unique, significant and auratic. Whether that singular value is aesthetic, luxurious, religious or subjective-affective, it predates (in that it appears to always have been a factor of human culture) both money - the ultimate extensive substitute, and the much more recent commodity form. Whereas toy culture today emphasises the monadic privatised life of the only child and their singular transitional object, virtual animals and their ancestors in the Ark offer an alternative universe of multitude and extension, of relationality, configuration and (postnatural) ecology.



*The Sims 2: Pets.* Maxis / EA 2004.

A full account of the development and mechanics of the most recent form of zoomorphic play object – the virtual animal – is beyond the scope of this article (cf. Giddings 2020, Tyler 2022). However, it would be useful to set out two aspects of the digital toy animal to further illuminate the notions of the postnatural and protopolitical. By virtual animal here I mean primarily digital play objects and systems such as *Tamagotchi* and simulated animals in videogames, from characters such as Donkey Kong and Sonic the Hedgehog to the predatory or edible wildlife of adventure games, and from the trainable puppies of *Nintendogs* to the chatty villagers and islanders of *Animal Crossing*. If play with the postindustrial and mediated animal toy substitutes in the child's everyday life a stylized and artificial object for lived contact with actual animals, then it would follow that the manufacture of and play with virtual animals represents not only another big step away from relationships with biological animals, from nature, but also from millennia of hands-on play with toys as material and physical objects. Clearly videogame avatars and NPCs, for all their thematic and visual similarities with both physical toys and actual animals, are quite different in material, imaginative and play terms. The child's hands cannot touch them directly, but at a remove, mediated by computer keyboard, touch screen, or game console controller. Any tactile material qualities of surface (hard shininess, soft pliability) are presented only to the eye and not the fingers' nerve endings. Smart toys such as robots and *Tamagotchi* appear at first glance to be handleable as if they were 'traditional' toys, but, like videogames, their salient mechanics and operations are removed from the immediacy of dextrous fingers. The *Tamagotchi* is effectively a tiny game console, its animal manipulated by button presses, and the main operations of the robot are pre-programmed and are performed automatically away from the hands. But key aspects of the manipulability and operability of toys persist in the virtual playful object, and in some regards are accentuated and augmented. As virtual-mechanical devices they can perform sophisticated movements and enact spectacular or useful behaviours, and as AI-driven creatures they take on some of the cognitive, sensate, narrative, and performative functions from the child's playful imagination.

Virtual animals exhibit a range of behaviours in their simulated worlds and through their interaction with players. Videogame creatures are often antagonists to be fought and killed, or

resources to be harnessed for transport or food. Though in thematic and agonistic terms there is a clear distinction between the feral, dangerous animal and the domestic or companion animal in videogames, there is in fact no wilderness in virtual worlds, no ‘wild’ animals: all animals and their behaviour are constituted only in relation to the virtual world and the player, are always already domesticated. In a gameworld, combat with and the killing of virtual animals is reminiscent of other bloody modes of formalised or ritual play with animals: dog-, bull- and cock-fighting, fox hunting, grouse shooting, and so on. We might loosely separate this broad, antagonistic mode from a similarly broad category of cooperative relationality. Whilst the former, if taken as a model for AI-human relationality globally and historically, resonates with SF dramas of malicious machine sentience and robot supremacy, I would argue that both offer alternative imaginative and empirical resources for figuring and developing the postnatural intelligent environment.

A key and widespread game mechanic in virtual animal applications, with a salient protopolitical dynamic, is one of nurture, discipline and training. For instance, though a *Nintendogs* puppy cannot be held and stroked like a cuddly toy dog, it offers a playful simulation of pet ownership and interaction: feeding, care, training and visual and affective feedback and reward, one that is generated by the toy machine itself not (only) through the child’s imaginative animation of it (cf. Apperley and Heber 2015). The animality of virtual creatures then is not a given, it is an achievement that arises from the interplay of digital technology, imagination and the ludic framings of games and children’s play, infused perhaps with actual experience of pet ownership, care and play. Tamagotchi play follows a similar logic, and numerous videogames from *The Sims* to *Legend of Zelda: Breath of the Wild* include the ability to tame, feed, train and deploy virtual dogs, cats, and horses. At first glance this meta-mechanic would appear to establish a clear power relationship between human player and simulated animal. But through a protopolitical lens a more ambivalent picture comes into focus. The virtual animal is self-animated in a way that predigital toys are not, even battery-driven or clockwork toy animals. They are in effect soft robots, and to realise their animal-facilitated goals, must be trained and nurtured, but to do that the player must first learn *how* to train and feed them, processes that are often beset with ludic and dextrous challenges. Through the game, the *animal* programs the *player* with the techniques it needs to behave effectively. As with all videogame worlds and activities, the virtual animal, through the game interface, trains the player in which buttons to press and disciplines them in the rhythms and dexterity required. In the moment of play, the child is as much the pet as is the Tamagotchi.

## **Conclusion**

Play with toys is, and has always been, an articulation of the imaginative, the material, and the technical. It is animated in protopolitical events in which ideas and behaviours of freedom, control, openness and rules, subjectivity and objectivity emerge, combine, clash and mutate. Toy animals specifically suggest ways of thinking about the contemporary

postnatural moment, thinking about the biological and the synthetic within a broader category of the animate, the animal-like, the creaturely, and the ways in which they come together and collude with human imaginations and bodies in ambivalent ways. From this perspective, toy animals in videogames and smart toys are not trivial phenomena bracketed in the realms of childhood and children's culture, but rather resources for innovation in, and dissemination and domestication of modes of being with, animate machines. They share a technocultural environment with actual and potential technologies including AI, robotics, and A-life, but offer too insights into the always already ludic-technical-animal character of human culture and everyday life.

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**Seth Giddings** is Associate Professor of Digital Culture and Design at Winchester School of Art, University of Southampton, UK. He is author of *Gameworlds: virtual media and children's everyday play* (2014), and *Toy Theory: technology and imagination in play* (forthcoming).