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PETROCHEMICAL BESTIARY: YUGOSLAV PETROMODERNITY AND THE DESIGN OF PLASTIC ANIMAL TOYS

ANDRIJA FILIPOVIĆ
Faculty of Media and Communications, Beograd

Given the almost simultaneous beginning of fossil fuel extraction and the foundation of socialist Yugoslavia, it can be argued that Yugoslav socialist modernity was petromodernity. Self-governing socialism and its relationship to the environment and nonhuman animals were grounded in and enabled by fossil fuel extraction, the products derived from it, and the energy produced by its use. In this article, I explore the relationships between Yugoslav petromodernity, plastic production, and plastic animal toys. I analyze the ways in which petromodernity and its attendant practices of fossil fuel extraction and petrochemical product consumption were naturalized through the habituation of bodily senses to plastic through petromodern pedagogy, as exemplified by the design of plastic animal toys. I argue that plastic animal toys become vehicles for the introduction of the Plasticene and means for the production of relations of dominance over animals and nature. The aesthetics of cuteness, as enacted through the design of plastic animal toys, played a key role in these processes.

Keywords: Yugoslavia, petromodernity, plastics, animals, toys

INTRODUCTION

Plastic products became very popular at the end of the 1970s, at the height of consumerism in Yugoslavia's self-governing socialist society. They were cheaply produced on a truly massive scale, so much so that people today nostalgically remember the smell upon entering Jugoplastika stores. A well-known Croatian writer, Silvija Šesto, recalls such an event in her short magazine article:

> In Ilica, not far from the crossroads with Gundulićeva, there used to be a small shop called Jugoplastika, which sold the fabled plastic-rubber figures produced by the

> Biserka toy factory in Zagreb. I loved it when my mother took me there. The smell of rubber and plastic made me happy. Mom always bought me something because it was affordable, even though our family never spent money on toys. (Šesto 2013)

The smell came from additives, chemicals added to plastics to make them more pliable or more colorful. The additives, such as phthalates, can be and usually are toxic as they leach out of plastic objects. Plastic objects also produce microplastics and other chemicals that can be very harmful as they slowly fragment (see Davis 2022). However, it is difficult to overstate how widespread and thoroughly integrated plastic products became in the everyday lives of Yugoslavs. As Jurica Pavičić, a Croatian writer, columnist and film critic, writes:

> At the height of its power, it was impossible to imagine the life of an average Yugoslav without Jugoplastika products. If you were an average citizen of the country, you would wear a Jugoplastika jacket. Children went to school with Jugoplastika schoolbags, played with Jugoplastika dolls, and wore Adidas shoes produced under license by Jugoplastika. When they sat down in their Renault 4 or Golf, Yugoslavs drove a car whose hubcaps, doors, steering wheels and dashboards came from that very company in Split's Brodarica district. (Pavičić 2018)

The ubiquity of Jugoplastika and other companies' plastic products should be understood within the framework of petromodernity. Petromodernity as a concept is usually used to describe the rise of fossil fuel extraction and exploitation since the mid-twentieth century in the global North and West. I argue, however, that petromodernity was a key feature of some, if not most, non-capitalist societies, such as Tito's Yugoslavia. In this respect, Yugoslavia's autocratic socialism, and in particular its consumerism, was made possible by the extraction of fossil fuels, products derived from them, energy generated by their use (coal-fired power plants, etc.), and their use in various kinds of infrastructure (in transportation, for example, through the use of gasoline and asphalt). However, the introduction of plastics into everyday life in Yugoslavia did not happen suddenly. Plastics had to be naturalized, i.e. made an indelible part of everyday life. Yugoslavs came to accept all the processes in the production of plastics, such as the extraction of fossil fuels that lead to global warming, or what is now called the Anthropocene; or, for the purpose of this article, the Plasticene. Plasticene is a term used in discussions about the possibility of naming a new geological epoch that has emerged as a result of human activities with planetary effects, more broadly called the Anthropocene. Plasticene refers to the fact that the production and use of plastics and other petrochemical products has skyrocketed since the mid-twentieth century, the period of the so-called Great Acceleration, made possible by the ever-increasing extraction and mass consumption of fossil fuels. Plastics, in their various forms as microplastics, nanoplastics, or as chemical traces left by their transformation as they circulate through various ecosystems, are taken as a marker for the beginning of this new anthropogenic epoch.

With the acceptance of oil and petromodernity, or more generally the Plasticene, Yugoslavs also accepted petromodern relations of domination over nature (constructed as a resource through the extraction of fossil fuels) and domination over animals (constructed

as powerless objects for exploitation through the design of plastic toys), both of which – extraction and exploitation – are essential features of the Anthropocene. In other words, the petrochemical bestiary – the relationality between human and nonhuman animals and plastics – produced by petromodern pedagogy in the second half of the twentieth century is one of the key elements of post-socialist necroecologies that are being lived today and that appear as an aspect of the Plasticene or Anthropocene as a planetary condition.

YUGOSLAV PETROMODERNITY AND PETROMODERN PEDAGOGY

As noted in the introduction, the concept of petromodernity is usually used to describe the state of affairs in the global North and West. Hence Christopher Breu's claim that petrochemical economy "has been central to post–World War II global capitalism and the preeminent position of the United States within it" (Breu 2021: 182). According to Breu, "this petrochemical economy includes the production of synthetic polymers from gas and nonrenewable energy through the vast panoply of consumer goods and packaging, the use of petrochemical products in preproduction" (ibid.). Barrett and Worden add that "oil culture has helped to establish oil as a deeply entrenched way of life in North America and Europe by tying petroleum use to fundamental sociopolitical assumptions and aspiration, inventing and promoting new forms of social practice premised on cheap energy" (Barrett and Worden 2014: xxv). Following their insights, petromodernity can be defined as Stephanie LeMenager does, as "a modern life based on the cheap energy systems long made possible by petroleum" (LeMenager 2012: 60). It becomes clear that this kind of production of dependence on oil and petrochemicals is not exclusive to those societies that were organized as capitalist after World War II. In the Eastern bloc countries, both communist under the control of the USSR and self-governing socialist such as Yugoslavia, the oil and petrochemical complex was also central to the economy and social organization in general. The use of fossil fuels shaped "fundamental sociopolitical assumptions and aspirations" in Yugoslavia, as it did in every country of the Western bloc and everywhere else on the planet. In short, petromodernity, as the increasing dependence on the extraction and use of fossil fuels and its petroleum promise, should be recognized as a planetary phenomenon that includes current and former communist and socialist societies as well as the global South, and not just the global North and West.

The exploitation of fossil fuels resulted in various products. Firstly oil, coal and natural gas. Then there are bitumen, asphalt, gasoline and diesel, and finally there are plastics or synthetic polymers. All of these participated and continue to participate in various forms in the petromodern formation of post-Yugoslav societies in the broadest sense, ranging from being constitutive elements of the human built environment, to the various forms of energy derived from them, to the multiplicity of products that humans consume. Plastic toys are therefore chosen as the subject of this article for a reason. As Irr and Kim (2021:

1) write, "plastics are deeply integrated into the cultural imaginary of petromodernity", so much so that "the work, play, medicine, sanitation, and sensations of petromodernity are literally wrapped in plastic" (ibid.: 3). Plastics are indeed everywhere today, but this was not the case until the mid-twentieth century. Plastics have become ubiquitous only because of petromodernity and its increasing dependence on the exploitation of fossil fuels, as well as the key role of fossil fuels in the development of consumer society. In Yugoslavia, extraction and exploitation of fossil fuels started right after the end of World War II with the opening of a facility in Vojvodina, and then in other constitutive republics.[1] The extraction of fossil fuels was immediately followed by the introduction of technologies for plastics production.

Jugovinil was founded in 1947 by the decision of the Federal People's Republic of Yugoslavia to produce PVC in Kaštel Sućurac near Split in Croatia, and it officially started its operations in 1949. At first, Jugovinil produced only three tons of powdered emulsion PVC (in 1950) under Swiss license, and the first batch of PVC foil was produced in 1951. Jugovinil then became the largest PVC production plant in Europe during the 1950s. Throughout the 1960s, Jugovinil continued to increase production, producing artificial leather, film, pipes and various granules in their new facilities, until the harmful effects of PVC on human health were discovered and production had to be reorganized in the 1970s. In the 1980s, Jugovinil produced PVC products under license from German and American companies. Jugoplastika was separated from Jugovinil in 1952 to meet two strategic goals set by the Party for the decade – mass employment of women and growth through private consumption. In the early years, Jugoplastika consisted of four production sectors – clothing, haberdashery, footwear and thermo-processing. The clothing sector processed Jugovinil's PVC into everyday clothes and protective suits, while haberdashery produced toys and bags. Then, in the mid-1960s, Jugoplastika introduced new technologies (imported from the West) based on mechanization and automation with programs for the production of PVC profiles, toys and balls from PVC paste, and it also began to produce pieces and parts for the automotive industry throughout Europe. Production grew steadily and in 1982 "1.5 million pieces of clothing, 65.5 million pieces of haberdashery, 7.7 million pairs of shoes, 4.2 million toys and 38,000 tons of thermoplastic products were produced" (Hrvatska tehnička enciklopedija [s.a.]). Jugoplastika was the only factory in the East that had a license to produce Adidas sneakers, and many other famous Western brands cooperated with Jugoplastika in various sectors such as the automotive industry, footwear and clothing, cosmetics, household appliances, etc. During the 1980s, plastic products were freely imported and exported, with plastic consumption in Yugoslavia becoming true mass consumption, and the presence of plastic became something that

[1] A company for the exploration and production of oil was founded in Zrenjanin in 1945, which later became Naftagas with headquarters in Novi Sad in 1949. Then, Jugopetrol in Kotor in Montenegro in 1947, Modriča in Modriča in Bosnia and Herzegovina in 1954, and Industrija nafte in Zagreb in Croatia in 1964 by merging the already existing Naftaplin with refineries in Sisak and Rijeka. Oil refineries in Pančevo began with their operations in 1968.

was no longer questioned, but seen as an inseparable part of everyday life, as it was the case in the West.[2]

Yugoslav petromodernity required a reshaping or habituation of human bodily senses to a novel material or what could be called a *petromodern pedagogy*, which also assumed the *petroleum promise*, that Laura Hindelang (2022: 15) defines as "the affective visual and/or textual framing of petroleum as a harbinger of future change and prosperity in active anticipation of its production or of its continuation". One aspect of my analysis of petromodern pedagogy aims to "decenter" children, that is to "to tell utterly different stories about [...] 'entanglements' with plastics and other materialities" (Kraftl 2020: 176) with an emphasis on materialities of animal toys, in relation to both their form (design) and content (plastics). I do this because "these socio-materialities [...] do not so readily offer themselves up as 'things'. Rather, they are in(di)visible, hidden (to some) in plain sight, and/or may even require still other techniques for humans to 'see' them" (ibid.: 188). Once finally seen, the materialities of plastic animal toys appear to be performing several things at the same time in accordance with what I call petromodern pedagogy. The term "pedagogy" here should be taken in a much broader sense to include not only children but also humans of various ages and their senses which had to be more or less slowly habituated to this new material. These processes of habituation to novel materialities in such a way that they become almost invisible background upon which human life is played out are social technologies of production of a specific form of life. Here, life at the time was intimately intertwined with fossil fuels producing socialist petromodernity. Other technologies of petromodern pedagogy include, for example, clothes made from synthetic fibers and all kinds of new fashions made possible based on these new textiles and hence novel individual and collective expressions (various subcultures, for example).

Furthermore, it can be argued that there occurred a kind of confluence of self-governing socialism and petromodernity, both of which promised future prosperity and both of which conditioned each other. On the one hand, self-governing socialism promised a future classless society, while on the other petromodernity gave the (petroleum) promise of unbounded extraction and exploitation of oil and the consumption of petrochemical products. The confluence of the two produced an image of a future self-governing society grounded in consumerism. Finally, oil and plastics in particular held the specific *socialist* promise. As Stokes (2000: 74) writes "the chemistry of plastics and synthetic fibers, along with automation, mechanization and peaceful use of nuclear power, represent a revolution in technology that contradicts in every way the conservative capitalist relations of production". Plastics lent themselves especially well to socialist societies since they enabled "a dialectical unity between utility and economy" (ibid.).

Petromodern pedagogy, the (re)education of the human sensorium to accept petrochemical products and their promise of future prosperity, was carried out through

[2] For more on the production of plastics in the former Yugoslavia and the ways in which it was consumed and turned into (un)manageable waste see Filipović 2023b.

the functionalization and aestheticization of plastics. Functionalization made plastics eminently usable for various everyday purposes, while aestheticization made plastics appealing and even beautiful. Plastics are used in everyday life through the production of toys, which are used by children at different stages of development. Some plastic toys are shaped like animals, and not just any kind of animals, but cute animals. Plastics are thus aestheticized through the design of cute animal toys. The aesthetics of cuteness, on the other hand, presupposes relations of power and powerlessness that project a certain kind of dominance over animals. Here, animals acquire additional "functions" within Yugoslav society, in addition to being food, sources of (physical and emotional) labor, and various materials. Cute animal toys serve, on the one hand, to naturalize plastic, and, on the other, to naturalize relations of dominance. Through these processes, Yugoslavs came to accept plastic as a material on a par with natural materials like wood, stone, and metal.

PRODUCTION AND DESIGN OF PLASTIC ANIMAL TOYS

Jugoplastika was not the only producer of plastic toys. There was also the Biserka factory in Zagreb, Croatia. Biserka opened in 1946, initially making textile dolls filled with straw. Until the late 1950s, Yugoslavs made their own toys from available materials – wood, straw, wool, pieces of textile, and other discarded domestic materials (Ćirić 2007). These homemade toys of natural or reused materials were being rapidly replaced by plastic and rubber products from Jugoplastika, Biserka and other factories. In 1958 Biserka began the production of PVC dolls. It was the only factory outside the USA that was licensed to produce dolls of Disney characters (Đujić 2017: 6). Jugoplastika produced various small plastic toys, and in the period from 1981 to 1985, 60 percent of its toys were exported to the West (ibid.: 8–9). Furthermore, according to a text by journalist Pavle Kićevac published in the *Kekec* magazine in 1979, Yugoslavia had the largest factory for the production of toys – Mehanotehnika founded in 1952 in Izola, Slovenia. Kićevac talked with Bogdan Orel, Mehanotehnika's head of marketing, who said:

> We are one of the few toy factories that have a very wide and varied program. Large factories in the world have chosen one or several toys. That's how they become famous. We have kept the whole program of over 400 different toys. The most important event for our factory is certainly the Toy Fair in Nuremberg (every year in February), where the exhibition space is very hard to get because over 5,000 companies and factories from all over the world participate. Mehanotehnika was given a prominent place, befitting its status in the production of toys. (Kićevac 1979)

Orel added that Mehanotehnika presented a new type of toys – models cars, and that in Nuremberg there was great interest in remote-controlled ships. The most produced types in Izola were electric telephones (1,600,000 pieces), flippers (500,000 pieces) and locomotives (1,000,000 pieces). In addition, the most popular toys of Mehanotehnika were cars and sewing machines. Orel said that "experts are in awe of the electric telephones

(six types) with the 'Made in Yugoslavia' mark, because you can use them to talk over a distance of 1.5 km. Electric locomotives and train cars belong to the most successful copies of real trains, so they are the most appreciated toy among adults" (Kićevac 1979). In the 1960s, Mehanotehnika began cooperating with the Department of Child and Adolescent Psychology at the University of Ljubljana on the project titled "The Age of Toys," and as a result, Mehanotehnika "began producing toys of the highest psychological quality and pedagogical content".[3] In addition to Jugoplastika, Biserka and Mehanotehnika, Tiktik from Krapina and 25. maj from Labin also produced toys. According to the Serbian journalist Katarina Đorđević, "there was almost no child in the former Yugoslavia who did not grow up with rubber toys from 'Biserka', and the happiest children of communism had miniature train junctions in their rooms – little trains and locomotives on train tracks" (Đorđević 2016). She also writes that the import of battery run robots from Japan began at the end of the 1960s, that Barbie came by the end of the 1970s, and that the 1980s were the years of "decorating Barbie's dollhouse, filling her closet and buying a car, a horse, a Vespa, a carriage and, of course, Ken" (ibid.). Moreover, as a Croatian columnist Kristian Benić writes:

> With the opening of the first factories "the material of the future" began entering homes – plastics, which quickly pushed out the hitherto dominant wooden toys. Jugovinil and Jugoplastika did not pass up the opportunity to invite children into their shops, where "the largest assortment of toys" was on offer, and the message of "the little girl" Zdenka Vučković in her duet with Ivo Robić was no coincidence either: "Daddy, buy me a Jugovinil cart". But plastic toys were not perfect. In 1960, the Center for Toys at the Naša Djeca society criticized domestic manufacturers of plastic dolls because they were too heavy, had expressionless faces, did not have a range of clothes, and all of that "had a disastrous effect on the development of children". (Benić 2019)

None of these texts explicitly mentions plastic *animal* toys, even though Kićevac and Orel talk about mostly plastic toys, while Đorđević refers to a toy bear in the very title of her text, even though the bear is made of non-plastic materials. One of the points of Đorđević's article is to criticize the dominance of plastic toys in relation to the use of "natural" materials in the past, similarly to Benić's quote. But plastic animal toys were omnipresent. Some of the images of plastic animal toys can be seen on the internet pages of Vladimir Perić's art project *Muzej detinjstva* (*Museum of Childhood*),[4] while some others can be found on e-commerce platforms. One ad for a toy collection attracted the attention of an online newspaper portal in 2020 when the seller asked for 270,000 dinars (over 2,000 euros) for their collection. The collection included several plastic penguins, as can be seen in the image gallery on the page.[5] The author of an article published on an internet portal (M.

[3] https://www.blic.rs/riznica/nostalgije/nostalgija-da-li-se-secate-ovo-su-najbolje-igracke-bivse-jugoslavije/c5y38cf (accessed 28 December 2022).

[4] http://seecult.net/vest/decenija-muzeja-detinjstva (accessed 12 January 2023).

[5] https://www.telegraf.rs/zanimljivosti/svastara/3246298-oglas-na-koji-su-mnogi-srbi-kliknuli-na-prodaju-igracke-naseg-detinjstva-od-cene-usi-otpadaju (accessed 28 December 2022).

Ra 2019) dedicated to the toys of Yugolavs' childhood presents a larger number of clearly photographed toys including velvet squirrels (it is unclear whether the velvet is synthetic or "natural"), plastic frogs, and plastic horses (with cowboys and American Indians on them). Some of them are illustrated with animals and animal forms. A number of these plastic animal toys on these internet pages are also Disney characters.

Disney characters appeared in Tito's Yugoslavia from early on across different media, including toys, comic books, picture books, educational books, cartoons, etc. As Radina Vučetić shows (2011: 189), Daffy Duck appeared in socialist Yugoslavia in 1951 when the newspaper weekly *NIN* began running a Daffy Duck comic. Disney characters also appeared in picture books and other kinds of books, and by 1970 two hundred and four different titles were published. In 1966 Disney's bestseller – *The Natural World* – was sold in 150,000 copies, testifying to the fact that the *aesthetics of cuteness* shaped relations toward animals and nature in general on a mass scale, across media and through different materialities (plastics, paper, film stock, analogue television signal, etc.). These Disney toys are collectible today, but also *objets d'art* as Vladimir Perić's project shows and, while changing their context from being toys to being artwork, they lost none of their cute affective charge.

Plastic animal toys were designed to be cute.[6] The definition of cute, according to the Merriam-Webster dictionary, is "attractive or pretty especially in a childish, youthful, or delicate way" as well as "obviously straining for effect".[7] The word "cute" appeared as a contraction of "acute" meaning "smart, shrewd" and that somewhat negative meaning still remains in English informing both the experience of and reflection on cuteness today. The contemporary meaning of "adorable sweetness" related to children, small animals (puppies and kittens) and objects only appeared in the 20th century. In this article, I will use both meanings and approaches to cuteness. Cute is structurally related to powerlessness in the sense that cuteness is always ascribed to a powerless, passive object (children, puppies, kittens, toys). Sianne Ngai (2012: 2) writes that, at the formal level, which is the objective level of style, cuteness is "a sensuous quality or appearance of objects", while at the discursive level, which is the level of subjective judgment, cute communicates "a complex mixture of feelings about an object to others and demanding that they feel the same". At this subjective level of judgment, cuteness expresses "an aesthetic response to the diminutive, the weak, and the subordinate" (ibid.: 53), and such an "experience of cute depends entirely on the subject's affective response to an imbalance of power between herself and the object" (ibid.: 54). Smallness is a characteristic of almost all children's toys, but as is visible in the

[6] Other plastic products were designed differently. Yugoslav design of plastic objects for everyday use was inspired by, at first, Russian constructivism and Bauhaus, and then by modernist design practice from the West, especially from Sweden's Ulm School. Cosmetics, for example, were designed to express ideas of modernity with clean and sharp lines and in white or transparent packaging. Marija Kalentić's work for the Neva factory was described in terms such as: "surprisingly rarefied expression", "ascetic approach to design", "contained design", "modernistic approach", "closest to the aesthetics of Chanel, Yardley, Helena Rubinstein and Clinique – cosmetic houses which accented, with packaging, their scientific, medical approach to beauty" (Vlajo 2013: 42).

[7] https://www.merriam-webster.com/dictionary/cute (accessed 22 December 2022).

article from an internet portal mentioned above, it is particularly noticeable with horses, given the discrepancy between real-life horses and their toy counterparts.

The formal, objective level of style, the non-aesthetic level, includes characteristics such as "smallness, compactness, formal simplicity, softness or pliancy" and "thus call[s] up a range of minor negative affects: helplessness, pitifulness, and even despondency" (ibid.: 64). Ngai claims that it is "crucial that the object has some sort of imposed-on mien – that is, that it bears the look of an object unusually responsive to, and thus easily shaped or deformed by the subject's feeling or attitude toward it" (ibid.: 65). Ngai continues to add that "the cutest toys have faces and often overly large eyes [...] other facial features – mouths in particular – tend to be simplified to the point of being barely there" (ibid. 91). A case in point is the Mickey Mouse toy produced by Biserka and presented as part of Vladimir Perić's *Muzej detinjstva* art project. Moreover, the image of the Mickey Mouse toy was chosen to illustrate the whole project, and the image shows Mickey Mouse with huge eyes and no trace of a mouth to speak of, staring at us. The next image shows several Mickey Mouse toys lined up in a grid on a wall, so we move from one big-eyed Mickey Mouse to many small Mickey Mice, with the cuteness effect working across the register, showing both the cuteness of toys from the past, but also exuding cuteness even today in this new context of an art exhibition.[8] Another page shows the images in reverse order – the Mickey Mouse grid image followed by two larger toys – with the same effect of cuteness.[9] In contrast to toy horses, which are made smaller by several orders of magnitude, the Mickey toy is enlarged – real mice are much, much smaller than the Mickey toy. However, this enlargement does not detract from the cuteness effect. On the contrary, the cause of the effect is the deformation of the object by enlarging the eyes and simplifying the mouth to the point of almost erasing it, leaving only the snout. Instead of having a threateningly large mouse, considering that no real animal of the species grows to that size, the mouse toy, made cute by a series of procedures such as removing the mouth and enlarging the eyes, reduces the real animal to a passive thing to be treated in any way by analogy.

Importantly, by relating these formal and discursive levels, the object that is cute invites "the aesthetic subject *to handle it physically*" (Ngai 2012: 62, italics mine). And, "with its exaggerated passivity, there is a sense in which the cute thing is the most reified or thing-like of things, the most objectified of objects or even an 'object' par excellence" (ibid.: 93). Cuteness with its insistence on physical handling of powerless object is, in Ngai's words, "hyperintensification of the thingishness of things" (ibid.: 105). Thingishness of a cute thing relates directly to inter-species behaviors. Cuteness in Joshua Paul Dale's (2017: 36) analysis possesses power to "both initiate and enhance intra- and inter-species affiliative behavior" and includes "prosocial behavior; emotional reactivity; cooperative action/play; and companionship/friendship". Expressions of cuteness, according to Dale, "comprise a form of agency: namely, an appeal aimed at disarming aggression and promoting

[8] http://www.seecult.info/vest/vodenje-muzej-detinjstva (accessed 12 January 2023).

[9] http://www.seecult.net/vest/decenija-muzeja-detinjstva (accessed 12 January 2023).

sociality" (ibid.: 37). Both Ngai's and Dale's approaches are important to my argument in this article. While the cuteness of an animal toy does produce interspecies relationality, it does so in such a way as to set the terms of that very relationality asymmetrically: the human is the subject, while the other is a (cute) object in terms of projecting future human-nonhuman animal relationality. As Ngai has shown, cuteness works on both the objective and subjective level to thingify the object to the point of rendering it absolutely passive and thus ready to be physically handled. Animal plastic toys, I would argue, teach humans to be subjects and to treat objects as things. That is, people are taught to treat animals not only as objects, but as hyper-intensified things of things. Animals are presented as absolutely powerless and passive and made available for use. This treatment of animals, as taught by petromodern pedagogy, differs from the use of animal flesh in the production of food, or the use of animals as sources of physical and emotional labor. The aesthetics of cuteness as a petromodern pedagogy of the senses teaches the human sensorium to treat animals as the thingishness of things, as that which is absolutely ready to be exploited for the purpose of extracting value of any kind.[10]

I would argue, then, that a particular petromodern pedagogy is at work here. There are two levels of habituation of the human body to petromodernity: the first concerns plastics, the second animals. On the one hand, prosocial behavior, emotional reactivity, cooperative play, companionship, and friendship are produced in relation to the plastic materiality of the (cute) object. Plastic is the material used to convey these seemingly positive and very human values of prosociality, emotionality, cooperativeness, companionship, and friendship. This is achieved by making plastics desirable to physically handle, both as a material that is pleasant to touch and through the design of objects that are made of plastics. Perhaps this is where the affective charge of Yugoslav plastic objects and plastic toys lies for post-Yugoslavs, who place them at the center of their nostalgia for the former society. On the other hand, plastic animal toys, as modern pedagogical tools for learning, teach people to treat animals as a *thing*.

Thus, one aspect is habituation to the sociability of plastic, while the other is projection of a particular relationality towards nonhuman animals. I want to emphasize the fact that these processes are two sides of a single phenomenon, which is petromodernity, because petromodernity taught us to accept the extraction of fossil fuels and the use of petrochemical products, while it also taught us to accept extractive and exploitative relations towards nonhuman animals and the environment in general. These processes occurred simultaneously, and plastic animal toys are artifacts that testify to the fact that people had to be taught to accept them. Or, in other words, Yugoslavs became accustomed to the use of plastics and the extractive relations that this use implied during the decades of socialist Yugoslavia.

[10] Particularly gruesome treatment of nonhuman animals that appears within petromodernity is Tito's trophy hunting (see Vujosevic 2019). I would argue that Tito's trophy hunting is at least in part enabled by the aesthetics of cuteness which reduced the animal to the thingishness of thing inasmuch as the animal was taken as a passive and powerless object to be hunted down and displayed in its death. That is, the aesthetics of cuteness worked across the ages as well as across media.

CONCLUSION

In this text, I argued that there was a kind of petromodern pedagogy at work in the production of relationships between plastics, animals, and humans. First, there was naturalization of the extraction and exploitation of fossil fuels. These processes were produced as necessary for the existence of (petro)modern Yugoslav society, as individuals and society as a whole became more and more dependent on fossil fuels and their products in their everyday lives. People's everyday lives were so transformed by the introduction of plastics and other petrochemical products that many of them became taken for granted, an invisible background against which the practices of production and consumption unfolded unimpeded. But this "taken-for-grantedness" came about through a certain education of the senses.

This was the second element – the production of relationality between the senses and plastic –where the body became accustomed to the materiality of petrochemical products. At the same time, the body became habituated to other results of fossil fuel exploitation, such as electricity, transportation infrastructure, and a whole range of other products. The body's habituation to petrochemical products occurred through aestheticization, as plastics were used as a material for the production of all kinds of toys, especially animal toys designed to be cute. Cuteness as an aesthetic category thus became a technology for naturalizing the exploitation of fossil fuels by making plastic a desirable material for the production of toys.

The third element is that cuteness – but also petromodernity in general – by its very extractive and exploitative structure produced a particular kind of relationship to nonhuman animals. Cuteness projected relations of power in which the object is thingified and rendered utterly powerless. The cuteness of plastic animal toys as pedagogical tools produced asymmetrical relations between human and nonhuman animals in which nonhuman animals-and, by analogy, nature as such-were produced as thingified, utterly powerless objects to be exploited for the extraction of value. The petromodern Yugoslav self-governing subject thus (re)produced itself through relations of extraction and exploitation toward nonhuman animals and nature. And just as the Yugoslavs were habituated, perhaps we post-Yugoslavs can de-naturalize the exploitative and extractivist petromodern framework and its petroleum promise that we inherited, and that in large part produced the post-socialist necroecologies lived today throughout the region.

REFERENCES AND SOURCES

Barrett, Ross and Daniel Worden. 2014. "Introduction". In *Oil Culture*. Ross Barrett and Daniel Worden, eds. Minneapolis: University of Minnesota Press, xvii-xxxiii.

Benić, Kristian. 2019. "Djetinjstvo između sna i jave". *XXZ Regionalni portal*, 24 September. Available at: https://www.xxzmagazin.com/djetinjstvo-izmedu-sna-i-jave (accessed 28 December 2022).

Breu, Christopher. 2021. "The Petrochemical Unconscious. Destructive Plasticities in Richard Powers's Gain". In *Life in Plastic. Artistic Responses to Petromodernity*. Caren Irr, ed. Minneapolis: University of Minnesota Press, 181–198. https://doi.org/10.5749/j.ctv2382dx1.13

Dale, Joshua Paul. 2017. "The Appeal of the Cute Object. Desire, Domestication, and Agency". In *The Aesthetics and Affects of Cuteness*. Joshua Paul Dale, Joyce Goggin, Julia Leyda, Anthony P. McIntyre and Diane Negra, eds. New York, London: Routledge, 35–55. https://doi.org/10.4324/9781315658520

Davis, Heather. 2022. *Plastic Matter*. Durham, London: Duke University Press.

Ćirić, Sonja. 2007. "Igračke iz muzeja: Čime smo se igrali". *Vreme*, 27 December. Available at: https://www.vreme.com/cms/view.php?id=554518 (accessed 14 December 2022).

Đorđević, Katarina. 2016. "Meda, lopta i bicikl. Igračke za sva vremena". *Politika*, 11. December. Available at: https://www.politika.rs/scc/clanak/347851/Meda-lopta-i-bicikl-igracke-za-sva-vremena (accessed 28 December 2022).

Đujić, Stela. 2017. *Stare hrvatske igre i igračke*. Pula: Fakultet za odgojne i obrazovne znanosti.

Filipović, Andrija. 2023a. "(Post)socialist Meontopolitics. The Sava River and Necroecological Modernization of Belgrade". *Historica. History and Related Sciences Review* 14/1: 74–88. https://doi.org/10.15452/Historica.2022.14.0006

Filipović, Andrija. 2023b. "Jugoplastika. Plastics and Postsocialist Realism". In *Plastics, Environment, and the Politics of Waste*. Tatiana Konrad, ed. Edinburgh: Edinburgh University Press, 125–142. https://doi.org/10.3366/edinburgh/9781399511735.003.0007

Hindelang, Laura. 2022. *Iridescent Kuwait. Petro-Modernity and Urban Visual Culture since the Mid-Twentieth Century*. Berlin, Boston: De Gruyter. https://doi.org/10.1515/9783110714739

Hrvatska tehnička enciklopedija. [s. a.]. *Jugoplastika*. Available at: https://tehnika.lzmk.hr/jugoplastika/ (accessed 21 December 2022).

Irr, Caren and Nayoung Kim. 2021. "Introduction. Concepts and Consequences of Plastic". In *Life in Plastic. Artistic Responses to Petromodernity*. Caren Irr, ed. Minneapolis: University of Minnesota Press, 1–10. https://doi.org/10.5749/j.ctv2382dx1.4

Kićevac, Pavle. 1979. "Jugoslavija je imala jednu od najvećih fabrika igračaka na svijetu". *YU nostalgija*, 13 April. Available at: https://yu-nostalgija.com/jugoslavija-je-imala-jednu-od-najvecih-fabrika-igracaka-na-svijetu/ (accessed 28 December 2022).

Kraftl, Peter. 2022. "Speculating with Childhoods, Plastic and Other Stuff". In *Speculative Geographies. Ethics, Technologies, Aesthetics*. Nina Williams and Thomas Keating, eds. Singapore: Palgrave Macmillan, 187–202. https://doi.org/10.1007/978-981-19-0691-6_12

LeMenager, Stephanie. 2012. "The Aesthetics of Petroleum, After Oil!". *American Literary History* 24/1: 59–86. https://doi.org/10.1093/alh/ajr057

M. Ra. 2019. "Ako ste odrasli u Jugoslaviji, ovdje biste mogli prepoznati omiljenu igračku". *Index*, 28 May. Available at: https://www.index.hr/magazin/clanak/ako-ste-odrasli-u-jugoslaviji-ovdje-biste-mogli-prepoznati-omiljenu-igracku/2088995.aspx (accessed 28 December 2022).

Ngai, Sianne. 2012. *Our Aesthetic Categories. Zany, Cute, Interesting*. Cambridge, London: Harvard University Press.

Pavičić, Jurica. 2018. "Slava Jugoplastici". *XXZ Regionalni portal*, 24 December. Available at: https://www.xxzmagazin.com/slava-jugoplastici (accessed 14 December 2022).

"Decenija muzeja detinjstva". 2016. *Portal za kulturu jugoistočne Evrope.* Available at: http://seecult.net/vest/decenija-muzeja-detinjstva (accessed 12 January 2023).

Stokes, Raymond G. 2000. "Plastics and the New Society. The German Democratic Republic in the 1950s and 1960s". In *Style and Socialism. Modernity and Material Culture in Post-War Eastern Europe.* Susan E. Reid and David Crowley, eds. New York: Bloomsbury, 65–80.

Šesto, Silvija. 2013. "I igračke ubijaju, zar ne?". *ZG-magazin*, 5 June. Available at: https://zg-magazin.com.hr/i-igracke-ubijaju-zar-ne/ (accessed 14 December 2022).

Vlajo, Koraljka. 2013. *Marijina industrija lepote. Marija Kalentić i "Neva" dizajn ambalaže.* Zagreb: Muzej za umjetnost i obrt.

Vučetić, Radina. 2011. "Diznizacija detinjstva i mladosti u socijalističkoj Jugoslaviji". *Istorija 20. veka* 3: 185–204. https://doi.org/10.29362/ist20veka.2011.3.vuc.185-204

Vujosevic, Tijana. 2019. "On Animals and Seas. Menageries as Representations of Yugoslav Global and Local Space in the Cold War Era". *Cultural Geographies* 26/1: 73–87. https://doi.org/10.1177/1474474018782193

PETROKEMIJSKI BESTIJARIJ: JUGOSLAVENSKA PETROMODERNOST I DIZAJN PLASTIČNIH IGRAČAKA U OBLIKU ŽIVOTINJA

S obzirom na gotovo istodobni početak ekstrakcije fosilnih goriva i osnivanja socijalističke Jugoslavije, može se tvrditi da je jugoslavenska socijalistička modernost petromodernost. Samoupravni socijalizam i njegov odnos prema životnoj sredini, a posebno prema ne-ljudskim životinjama, bili su utemeljeni i omogućeni ekstrakcijom fosilnih goriva, proizvodima od fosilnih goriva, kao i energijom koja se dobijala od njih. U ovom članku istražit ću odnose između jugoslavenske petromodernosti, proizvodnje plastike i plastičnih igračaka u obliku životinja. Analizirat ću načine na koje su petromodernost i njezine prateće prakse, poput ekstrakcije fosilnih goriva i potrošnje petrokemijskih proizvoda, naturalizirane putem proizvodnje i dizajna plastičnih igračaka u obliku životinja. Plastične igračke u formi životinja postaju sredstva kojima se uvodi plasticen, ali i petromoderni odnos dominacije nad životinjama i prirodom. Ključnu ulogu u ovim procesima igra estetika slatkoće koja se očituje u dizajnu plastičnih igračaka u obliku životinja.

Ključne riječi: Jugoslavija, petromodernost, plastika, životinje, igračke