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GEORGETOWN LAW
INSTITUTE FOR PUBLIC REPRESENTATION

October 30, 2018

VIA E-MAIL

Donald S. Clark, Secretary of the Commission
Andrew Smith, Director, Bureau of Consumer Protection
Federal Trade Commission
600 Pennsylvania Avenue NW
Washington, DC 20580

Dear Mr. Clark and Mr. Smith,

Campaign for a Commercial-Free Childhood ("CCFC") and the Center for Digital Democracy ("CDD"), by their counsel, the Institute for Public Representation, together with the undersigned organizations, ask the Federal Trade Commission ("FTC") to investigate the marketplace of apps targeting young children. A major new study published today in the *Journal of Developmental & Behavioral Pediatrics* identifies several concerning practices in apps designated as "Designed for Families" in the Google Play Store.[1] The research was led by University of Michigan C.S. Mott Children's Hospital, and the study's senior author is Jenny Radesky, M.D., a developmental behavioral expert and pediatrician, and lead author of the 2016 American Academy of Pediatrics policy statement, *Media and Young Minds*.[2]

Employing a business model which relies on revenue from in-app purchases and data-driven targeted marketing, these apps routinely lure young children to make purchases and watch ads, though they are marketed to parents as appropriate for young children. As the research makes clear, these practices are unfair and deceptive to children and parents, and we urge the FTC to take appropriate and swift action.

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[1]Meyer, M., Adkins, V., Yuan, N., Weeks, H. M., Chang, Y., & Radesky, J. (2018). Advertising in Young Children's Apps: A Content Analysis. *Journal of Developmental & Behavioral Pediatrics*, 1-8, https://journals.lww.com/jrnldbp/Abstract/publishahead/Advertising_in_Young_Children_s_Apps___A_Content.99257.aspx.

[2] Council on Communications and Media. (2016). Media and Young Minds. *Pediatrics*, *138*(5), e20162591–e20162591. https://doi.org/10.1542/peds.2016-2591

I. Findings of the Michigan study: apps for young children employ manipulative methods

Between December 2017 and March 2018, researchers in the Division of Developmental Behavioral Pediatrics at the University of Michigan Medical School, through a comprehensive research design, analyzed the content of 135 apps marketed to or played by children under five years of age, which they selected from two sources. They reviewed 39 (35 free and 4 paid) apps captured as part of a study of family mobile device use, and the 96 (50 free and 46 paid) most popular apps—that is most frequently downloaded—in the "Ages 5 and under" category of the Google Play store.[3] At the time the research was conducted, the majority of apps analyzed had been downloaded more than ten million times each, in some cases upwards of 50 million times.

Ninety-five percent of the apps analyzed contained at least one type of advertising.[4] Much of this advertising was embedded into games or activities in manipulative ways, such as requiring children to view ads to continue playing or to unlock play items, or encouraging the purchase of play items or a more desirable, paid version of the app.

II. The manipulative practices employed by children's apps are unfair and/or deceptive.

The University of Michigan report found that the advertising approaches commonly employed by the children's apps "appeared to show a range of potentially disruptive (i.e., interrupting the child's gameplay) or persuasive characteristics."[5] The researchers noted that Section 5 of the FTC Act prohibits "deceptive advertising and marketing practices, defined as 'a representation, omission, or practice that is likely to mislead the consumer acting reasonably in the circumstances, to the consumer's detriment,'" and said "[I]t is likely that persuasive, gamified advertising practices in children's apps would fit under this designation when children are the intended audiences."[6]

For distinct reasons discussed below, the practices identified in the University of Michigan Medical School research are deceptive to both children and parents.

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[3] The researchers downloaded apps from Google Play and not iTunes because the laboratory uses tablets with Android operating systems. Many of the apps are also available on iTunes. Meyer et al., 3.

[4] *Id*., 14.

[5] *Id*., 3. The term persuasive design "combines the theory of behavioural design with computer technology. Behavioural design uses a system of rewards and punishments to determine human behaviour patterns. Both persuasive and behavioural designs can be used to increase wellbeing for personal and social good. However, it is arguably more often used to manipulate human behaviour so that users subconsciously act in the commercial interests of others…. Persuasive design strategies are deployed for commercial purposes to keep users online." Baroness Kidron et al., Disrupted Childhood; The Cost of Persuasive Design at 16 (2018), https://www.basw.co.uk/system/files/resources/disrupted-childhood.pdf.

[6] Meyer et al., 7, referring to Section 5 of the Federal Trade Commission Act, Ch. 311, §5, 38 Stat. 719, codified at 15 U.S.C. §45(a).

A. It is deceptive to young children to disguise ads as being part of a game or to make ad viewing an essential part of game play

The Michigan researchers noted that young children "lack a meta-awareness about advertising and are unable to critically reflect upon their reactions to it. When advertisements are combined with rewards, both cognitive and emotional processes respond to persuasion. In the case of the gamified ads we documented—those involving watching ads to collect tokens or gameplay items—children under 6 years may be especially susceptible to this approach because of their responsiveness to positive reinforcers."[7]

Prior research suggests that children are not aware of ads until 4–5 years of age.[8] Even when children can differentiate between an ad and non-sponsored content, they still have considerable trouble understanding the intent of the ad. For example, according to some researchers, children ages 6–7 predominantly view advertisements as informational programs that are used as "a break for either the people working on television or the viewers."[9] One study published in 2011 found that "most children's understanding of the "selling intent" of television food advertising didn't emerge until around 7–8 years, reaching 90% by 11–12 years.[10]

Children have even less understanding of online advertising than on television. Several studies have found that children have "lower awareness of advertising on websites compared with television, and greater difficulty recognizing it."[11] Furthermore, the lack of separation between sponsored and non-sponsored content online has the potential to make it harder for a child to discriminate between an advertisement and entertainment.[12] The blurred lines between ads and entertainment "may simply overwhelm the defenses children are still in the process of building."[13]

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[7] Meyer et al., 7.

[8] Kunkel, D. (2012). Children and Advertising: Content, Comprehension, and Consequences. *HANDBOOK OF CHILDREN AND THE MEDIA 395*, 403; Wilcox, B. L., Kunkel, D., Cantor, J., Dowrick, P., Linn, S., & Palmer, E. (2004) Psychological Issues in the Increasing Commercialization of Childhood, *American Psychological Association*. https://www.apa.org/pi/families/resources/advertising-children.pdf

[9] Andronikidis, A. I., & Lambrianidou, M. (2010). Children's understanding of television advertising: A grounded theory approach. *Psychology and Marketing*, *27*(4), 299–322. https://doi.org/10.1002/mar.20333

[10] Carter, O. B. J., Patterson, L. J., Donovan, R. J., Ewing, M. T., & Roberts, C. M. (2011). Children's understanding of the selling versus persuasive intent of junk food advertising: implications for regulation. *Social Science & Medicine*, *72*(6), 962–968. https://doi.org/10.1016/j.socscimed.2011.01.018

[11] *Id*.

[12] Clarke, B., & Svanaes, S. (2012). Digital marketing and advertising to children: a literature review. Advertising Education Forum. 45. Retrieved from http://www.aeforum.org/gallery/8612144.pdf (citing Mallinckrodt and Mizerski 2007; Ali, Blades et al. 2009).

[13] Moore, E. S. (2004). Children and the Changing World of Advertising. *Journal of Business Ethics*, *52*(2), 165. https://doi.org/10.1023/B:BUSI.0000035907.66617.f5

In short, preschool children are vulnerable to advertising and benefit from clear separation of ads and programming content. Yet many of the ads on preschool apps would be difficult even for adults to identify, since they are camouflaged as being part of game play, as illustrated in the screenshots below. It is deceptive to target young children with ads in this way.

The FTC's own Enforcement Policy Statement on Deceptively Formatted Advertisements states "advertising and promotional messages should be identifiable as advertising."[14] The manipulative practices employed by these children's apps are like the prohibited "misleading door openers" cited in that guidance, which lead consumers "to interact with advertising with which they otherwise would not have interacted."[15]

In addition, the guidelines of the Children's Advertising Review Unit, an industry self-regulatory program, state: "Advertising should not be presented in a manner that blurs the distinction between advertising and program/editorial content in ways that would be misleading to children."[16]

The apps analyzed commonly used deceptive techniques, embedded in game play, to display ads for apps and products. In 35% of the apps reviewed in the study (54% of the free apps) advertising videos suddenly interrupted play, or appeared where one level ends and before the other begins. Some apps contain buttons with misleading symbols such as "$" or a teddy bear, which when clicked, would bring up a video for other apps, toys, or food (e.g., Lunchables). Other apps also contained ads camouflaged in game play items, which when clicked take the user to an ad video. In *Talking Tom* by Outfit7, a present drops from the ceiling into the background. A child who reasonably assumes that the present is part of a game will instead be prompted to "watch videos and win." In *Builder Game* by Bubado, thought bubbles regularly appeared next to characters to indicate what the player should do next; in many cases, these were games that could only be unlocked by making an in-app purchase or watching an ad video.

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[14] Enforcement Policy Statement on Deceptively Formatted Advertisements, 81 FR 22596 Federal Regulation § (2016). Retrieved from https://www.ftc.gov/policy/federal-register-notices/commission-enforcement-policy-statement-deceptively-formatted

[15] *Id*. At 22598.

[16] Children's Advertising Review Unit. (2014). Self-Regulatory Program for Children's Advertising. 10. Retrieved from http://www.asrcreviews.org/wp-content/uploads/2012/04/Self-Regulatory-Program-for-Childrens-Advertising-Revised-2014-.pdf

In Disney's Olaf's Adventures, *selecting a glowing cake which is not marked as an ad takes you to a store.*

In Budado's Builder Game, *clicking on a thought bubble sometimes brings you to a free activitiy and sometimes takes you to a store.*

Other apps that disguise ads as being part of the game include but are not limited to *Sight Words* by EDBUZZKIDS, which prompts users to click on ads by guiding them to a bottom banner with cartoon hands; and *Dentist Game for Kids* by Edujoy, which features a similar hand demonstration to get players to click on a smiling, cartoon tooth.

In addition, a number of popular apps manipulate young children to watch advertising by interrupting play. Children are required to watch an ad to continue gameplay, or to earn coins or other items that will make play easier or more successful. Some of the ads urge children to make in-app purchases, while others are for other media or products. These ads repeatedly intrude upon the child's gaming experience and sometimes take it over completely.

Some pop-up advertisements weren't able to be closed immediately, and others forced the player to watch the entirety of the video advertisement before being able to close it. Moreover, the "X" to close out of an ad was often very small, leading the player to tap the advertisement itself and bringing them to a purchase screen or app store. Adults know how frustrating it can be when they cannot click on a small "X" to close an ad, or can't even find a place to click. It is particularly unfair to employ these tactics on young kids, whose fine motor skills are just developing.

Other pop-up advertisements were interactive and forced the player to engage in a demonstration version of the advertised app before the X button would appear to close out of it. In some apps, such as *Kids Animal Jigsaw Puzzle* by Espace Publishing, pop-up advertisements

took up roughly as much time as gameplay, since advertisements appeared every time the player completed a puzzle and returned to the homepage, and while trying to open a new puzzle. It is deceptive to children to use the manipulative tactics described above to force them to watch advertising as part of playing a game.

B. It is unfair to have a character in a game pressure a young child into making an in-app purchase.

Children are especially vulnerable to messages delivered by media characters. Children form deep attachments to media characters and often view them as friends.[17] This is particularly true for the younger children targeted by the apps in the University of Michigan study.[18] Research has shown the power of licensed characters to influence children about the taste of breakfast cereals and even override their subjective impressions of how food tastes.[19]

The Michigan researchers expressed concern that in many apps they examined, familiar characters encouraged children to make in-app purchases. The study explains that "children are known to develop trusting emotional parasocial relationships with media characters and pay more attention to and learn better from familiar characters."[20] The study found that "[in]some cases, app characters showed disapproval of the user or an important mission (such as rescuing characters) could not be accomplished without a purchase, which may also lead children to feel an emotionally charged need to make purchases."[21]

In some preschool apps, licensed characters frequently suggest that players use upgraded play items or other locked aspects of the game. In *Strawberry Shortcake Bake Shop*, Strawberry Shortcake frequently notes that the paid upgrade makes steps easier or quicker. For example, when the user is presented with an option of two knives to slice a cake, Strawberry Shortcake says "Cherry Jam's chopping knife slices really smoothly," describing the paid knife. When players select a locked recipe, they are redirected to the in-app purchase section and Strawberry Shortcake says "Oops, you'll have to purchase this recipe to bake it with me, it's got lots of fun activities to do together!"

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[17] Bond, B. J., & Calvert, S. L. (2014). A model and measure of US parents' perceptions of young children's parasocial relationships. *Journal of Children and Media*, *8*(3), 286–304. https://doi.org/10.1080/17482798.2014.890948

[18] Rosaen, S. F., & Dibble, J. L. (2008). Investigating the relationships among child's age, parasocial interactions, and the social realism of favorite television characters. *Communication Research Reports*, *25*, 145–154. doi:10.1080/08824090802021806

[19] Lapierre, M. A., Vaala, S. E., & Linebarger, D. L. (2011). Influence of licensed spokescharacters and health cues on children's ratings of cereal taste. *Archives of Pediatrics & Adolescent Medicine*, *165*(3), 229–234.; Roberto, C. A., Baik, J., Harris, J. L., & Brownell, K. D. (2010). Influence of licensed characters on children's taste and snack preferences. *PEDIATRICS*, *126*(1), 88–93. https://doi.org/10.1542/peds.2009-3433

[20] Meyer et al. 7, citing Brunick, K.L., Putnam, M.M., McGarry, L.E., et al. (2016). Children's future parasocial relationships with media characters: the age of intelligent characters. *J Child Media, 10*. 181–190.

[21] *Id*.

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In some games, characters even express disappointment or sadness when users do not pay for an aspect of the game. In Bubadu's *Doctor Kids*, sometimes a character thinks of a locked game. When a player taps on the bubble, a window appears to purchase the game. If the player doesn't buy the game, the character cries and runs away (Figure 1.) Similarly, in Bubadu's *Builder Game*, the characters will look sad and shake their heads if a child does not make an in-app purchase. It is worth noting that this is the same reaction the game's characters have if a child does not complete a level. Children playing the game, therefore, are sent a strong message that by declining to make an in-app purchase, they are failing their "friends."

In Bubadu's Doctor Kids, *a character cries if you click away from the in-app purchase store.*

It is unfair to make a young child feel like they have failed and let a friend down if they do not make an in-app purchase, and to otherwise exploit a child's attachment to a game's characters. The use of interactive tactics, such as behavioral cues, to promote in-app purchases cynically takes advantage of a child's limited development capacity, and should not be acceptable in such child directed apps and games.

C. It is deceptive to parents to market as "free" apps that require additional purchases in order to play

In 46% of the apps reviewed in the study (67% of the free apps) children were prompted to upgrade by purchasing the "full version" of the app. The full version was often promoted as being "ad-free," either removing the banner ads on the periphery of the screen during gameplay, or removing pop-up ads that disrupted gameplay. Thirty percent of all apps in the study, and 41% of all free apps, included in-app purchases which allowed users to buy extra lives, gain access to more characters or locations, or obtain items that would make gameplay easier or more successful.

For example, a child playing the free version of *Jungle Animal Hair Salon* by TutoToons, sees the many characters which populate the game, but only as a tease. A child can only play with one character—the sloth—without purchasing a different character for $1.99 or unlocking all for $3.99. In *My Very Hungry Caterpillar* by Storytoys, the full app (which costs $3.99) allows the caterpillar to play with more balloons or toys from the toy box, which appear faded and are inaccessible in the free app. In *Balloon Pop*, the user is shown fancier balloons to pop along with standard balloons, but reminded with a sound effect and written text that those balloons are only available in the full app (which costs $3.49). In *Hello Kitty Lunchbox* by Budge, the player can buy a greater selection of items to decorate the lunchbox and foods to include in Hello Kitty's lunch. In *Clawbert* by HyperBeard, coins and jewels can be purchased to help eggs hatch faster, or to refill the game machine rather than waiting one to two hours for it to refill itself.

In some games, a child cannot do well or "win" without making an in-app purchase. In *Strawberry Shortcake Bake Shop* by Budge, the player creates a dessert for one of Strawberry Shortcake's friends. When an order is successfully filled, the player receives a star. As noted previously, players are presented with options to purchase more effective kitchen tools or exclusive ingredients. For example, while cutting a cake with the free, wooden knife, the player needed to move the knife in and out across the cake and it was more difficult to finish; with the purchased, metal knife, the cake was more quickly cut in one swipe. If the player doesn't make a purchase and is not able to complete the dessert, the child does not earn a star, and Strawberry Shortcake says "we didn't fill this order, so this dessert can be just for you."

Other apps that manipulate young children into wanting in-app purchases include but are not limited to Budge's *Rescue Bots,* and *Caillou Check-up Doctor*.

These tactics are deceptive to parents. There is nothing in the description of the apps to indicate that the free versions of the apps are just previews, or that it will be difficult or impossible for young children to actually enjoy the game without making in-app purchases. For instance, the description of *Strawberry Shortcake Bake Shop* only notes that the game "offers in-app purchases." It doesn't say that the in-app purchases are essentially mandatory if one wants to advance in the game. It is therefore deceptive to parents to call the game "free," or designate it as appropriate for children ages five and under, something that many reviews of the game in the Google Play Store note. For example:

August Balchuck

★ ☆ ☆ ☆ ☆ August 12, 2017   👍
                                                                                     607

I think it very sad that you have to play for every little thing. If you are going to make it a free game then you should find a way to work your level up. Not have the parents pay acrazy price for the game. Very disappointing and I will be deleting the game and going somewhere else. Bye!!! 😡

In *United States v. Adteractive, Inc.*, the FTC found it was a deceptive practice to offer
something for "free," then force consumers to wade through a series of ads and offers, and
conceal that one must incur certain expenses to enjoy what was portrayed as "free."[22] The games
described above are similarly deceptive.

D. It is deceptive to parents to market games that are constantly interrupted by ads as "educational."

Thirty-four percent of the apps analyzed in the study were in the "Educational" category
of the Google Play store.[23] The study did not assess the content of these apps to determine
whether or not they are in fact educational. It did, however note research by Pasek et al. and
others that describes how distracting visual and sound effects make learning difficult.[24]

Many of the apps designated as "educational" were rife with the disruptive advertising
techniques described above. The study found that 93% of the "educational" apps contained
advertising, and 45% of them had teasers to purchase the "full version" of the app. [25]
In *Dentist Game For Kids* by Edujoy, children are exposed to frequent hidden/camouflaged and
hard to close ads, such as a smiling cartoon tooth with a hand pointing toward it to lure the child
to click. Clicking on it leads to a display of ads. Pop-up ads are also hard to close, and missing
the "x" brings children to the Google Play Store. *Baby Puzzles* by Edujoy has frequent pop-up
ads, where the "x" to close does not appear right away and is then hard to click to close out the
ad. Again, missing the "x" brings the child to the Google Play Store. Children are also prompted
to click on "more apps" which takes them to Google Play, or to purchase an "ad-free" version of
the game.

If a child's play is consistently interrupted by advertising and/or diverted to external
websites and stores, the potential educational value of the app is completely undermined. As the
authors of the study note, "our findings raise concern that commercially available apps may have

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[22] United States of America v. Adteractive, Inc., No. 3:2007cv05940 - Document 4 (N.D. Cal.
2007), No. No. CV-07-5940 SI (United States District Court Northern District of California
November 27, 2007). Retrieved from https://law.justia.com/cases/federal/district-
courts/california/candce/3:2007cv05940/197951/4/

[23] Meyer et al., 3.

[24] *Id.*, 1.

[25] *Id.*, 6, Table 3.

lower educational value due to a high prevalence of distracting ads."[26] It is therefore deceptive to parents to claim that apps where game play is consistently disrupted by ads are educational.

III.   CONCLUSION

The manipulative techniques described in the University of Michigan Medical School study result from the "hybrid monetization" business model for today's apps. Google says this model "combines customized and targeted in-app purchase offerings with relevant ads in a variety of formats, with the goal of maximizing revenue and maintaining an experience to keep app users engaged."[27] Use of this model has resulted in practices which are unfair and deceptive to young children and deceptive to their parents. We urge the Commission to immediately launch an investigation of Android apps designed for, and marketed to, young children and hold developers accountable for their practices.

Respectfully Submitted,

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Campaign for a Commercial-Free Childhood	Consumer Action
Center for Digital Democracy	Consumer Federation of America
Badass Teachers Association	Consumer Watchdog
Centre for Child Honouring	Corporate Accountability
Color of Change	Defending the Early Years

[26] *Id.*, 6.

[27] AdMob by Google. (2015). A Winning Combination: How using in-app purchases and ads together can maximize mobile game revenue. 5. Retrieved from https://static.googleusercontent.com/media/www.google.com/en//admob/pdf/ebooks/The-Winning-Combination.pdf

Electronic Privacy Information Center

Media Education Foundation

New Dream

Open MIC (Open Media and Information Companies Initiative)

Parent Coalition for Student Privacy

Parents Across America

Parents Television Council

Peace Educators Allied for Children Everywhere (P.E.A.C.E.)

Public Citizen

Story of Stuff

TRUCE (Teachers Resisting Unhealthy Childhood Entertainment)

USPIRG