

# UNHINDERED CREATIVITY

ENABLE KIDS TO INVENT THEIR OWN GAMES.

By Saul Griffith

**L**OOKING BACK AT THE TOYS I LOVED most as a child, I find that the memories that lasted, and the adventures that stuck, were with homemade toys and homemade experiences. I of course remember playing with Legos and a fabulous wooden train set that I was given when I was 5, but few other toys actually stick in my mind.

My parents gave me the luxury of inventing my own toys and games from a very young age; sometimes my games started with a ready-made toy or the odd materials my parents had sitting around. Most were fueled by imagination and sheer curiosity — either that or the particularly delightful boredom that is characteristic of childhood.

Shooting my sister with a water pistol was fun, but the most distinctly proud moment I recall was a game I invented for myself when I was 8 that entertained me for hours. With water pistol in hand I'd shoot a squirt at the very top of a window. The stream would dribble down the window, typically dividing into two or three paths. I'd then shoot the bead of water at the head of each path, which would in turn create two or three more paths.

Quickly, exponentially, the number of paths would increase and I'd be frantically shooting at a fractal of water droplets, trying to score the most direct hits before the first drop dribbled to the bottom of the window. This was analog *Asteroids*, that fabulous Atari video game, only higher resolution and more compelling than its computer counterpart. I can still feel the sense of achievement of having invented a cool game that soon was played by my other friends.

At 9, I became fascinated with grappling hooks. I do not remember which comic book introduced

me to the idea, but as soon as I had it in my head that a grappling hook could take me wherever I wanted to go, I simply had to make one. I never made it really work, but I can remember dozens of trees and walls I tried to ascend with the various prototypes. Like an X Prize project, I didn't necessarily reach the end goal, but I learnt lots of other applications on the way.

I had to learn to tie knots. I learnt the material properties of all the hooks I tried (wood, plastic, aluminum, steel). I learnt that falling pieces of steel on the end of string are subject to the laws of gravity, and that sharp points may effectively grip branches, but they also pierce your skin. I learnt that you need a certain diameter of rope to support your weight and not cut into your hands as you try and haul yourself up with it, and I learnt that certain tree branches can't support your weight.

By 10, I was on to inventing jet-powered helicopters. Do you like fire? I like fire. Fireworks were illegal in Australia when I grew up, except for the Queen's Birthday weekend celebrations, which conveniently fell near my sister's birthday, so we always had lots of fireworks (my sister was the princess in my family on her way to being queen). I loved fireworks, not for the colors and noise so much as for the raw materials.

After a few years of making jet-powered Matchbox cars, I realized I could put these precious black powders and cardboard canisters of energy to a better use: a helicopter. I must have spent three days hand-carving and gluing a 3-foot-diameter rotor blade out of balsa and bamboo from the garden. The idea was to redirect all the thrust of the Roman candle out through an aluminum-can-and-electrical-



tape nozzle at the tips of the rotor. Thus spinning, the helicopter would lift off. I'm not going to tell you it worked great, but it did in fact work — getting the two fuses to ignite the two candles simultaneously took hours of hugely fun experimentation. The chopper flew about 8 feet up and about 30 feet sideways until it hit the clothesline. It only singed one bed sheet before I managed to turn the garden hose on it. At least that time I remembered to keep the hose handy.

The thing I find fascinating about these escapades is how strongly etched each of these experiences is in my memory. Not in my parents' memory, of course, as I often went to great lengths to conceal the actual goings-on. It's amazing how many injuries via failed inventions could be passed off as bicycle falls, climbing trees, or another water fight with that nasty kid up the street. Poor kid; more than once my mother castigated his mother for a purported wrongdoing.

This rambling is my plea for encouraging the "other" toys and games, not the ones you buy, not even the ones you learn to build through MAKE. It's by providing the environment (and turning the

**Getting some huge, gnarly air as an 8-year-old using a bike ramp I built myself. Note: I didn't even injure myself ... this time.**

blind eye) that you enable kids to use their unhindered creativity to invent their own games. Keep an extra box of cardboard around, a jar of screws, a coil of rope. It may not look like invention to you, but for the kid at that moment it is their entire world; it is their idea and inspiration; and their intensity and devotion to it should be celebrated. I took no photos of these things I built, yet they stick as firmly in my memory as anything else I did in my childhood.

That sort of recollection can only be attributed to the intensity of pure joy.

If this column helps you recall the triumphant toy inventions of your youth, I'd love to hear about what they were (and are)!

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Saul Griffith thinks about open source hardware while working with the power-nerds at Squid Labs ([squid-labs.com](http://squid-labs.com)).