MythBusters and the Joy of Technology

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In more than one hundred episodes, the hosts of Discovery Channel's *MythBusters* have made many strange and amazing devices. Adam Savage and Jamie Hyneman, along with Tory Belleci, Grant Imahara, and Kari Byron, have built a two-story Newton's cradle, a salami-powered rocket, and a pair of metal teeth that could catch a bullet in midair. In each episode, the hosts take apart and transform familiar objects, raise everyday activities to absurd scales, and create things that no one has made before. As they build and test these devices, they laugh with the joy of technical practice. *MythBusters* presents a vision of technology in which the material world can be endlessly transformed by playful activities. This vision is part of a long tradition of enthusiastic amateur engagement with technology and also resonates with the vision of technology inherent in the contemporary maker movement.

Each one-hour episode of *MythBusters* is structured around testing several "myths." These myths are drawn from urban folklore, common sayings, and movie scenes. Would a bullet hole in an airplane window cause the plane to explode? Can helium balloons lift a person in a lawn chair? Could a car drive with square tires? The MythBusters create a series of tests to investigate different aspects of the phenomena. They start with small-scale versions before moving on to full-scale tests. Episodes often end with a larger-than-life test, featuring spectacular explosions and crashes. After the series of tests, they declare the myth "busted," "plausible," or "confirmed." They have kept this effective formula over the ten years that the show has been on the air.

Though the show is motivated by the myths, the process of building the apparatuses occupies most of each episode. Through the depiction of the process, *MythBusters* presents a vision for interacting with the material world in which broad technical mastery is achievable, commercially avail-

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able objects can easily be transformed, and almost nothing is impossible. The hosts of MythBusters are technical polymaths. During most builds, they move between a wide variety of techniques. They weld structural steel, machine intricate parts, carve foam into realistic forms, and wire complicated electronics. Though each of these skills is associated with a different specialized profession, the hosts of MythBusters seem to be able to pick up these and many other skills. In the process of building their testing apparatuses, the hosts also show a world in which everyday objects can be easily transformed and modified. They have cut the engines out of cars, made a washing machine spin with deadly power, and rigged a bus with remote control. In the world of the show, the familiar material world takes on an extraordinary plasticity. Finally, the build sequences suggest that, to the hosts, nothing is impossible. The projects they set out to complete are well beyond what most people would consider possible, yet by the end of each episode, the hosts achieve the goal. This open-ended world of possibility runs through every project the MythBusters undertake.

The emotional resonance of this mode of interacting with the technical world is ultimately more important than the specific processes and techniques involved in the show. Though *MythBusters* focuses on making and transforming the material world, it is not an instructional show. The show explains the principles behind what the hosts build, but it does not explain how they are made. Glimpses of the process are shown, but many steps are skipped and no instruction is given on how to use tools and machines. The show is also peppered with warnings to the viewers not to try these tests at home, and key aspects are explicitly hidden during some of the more dangerous builds.

Rather than dwelling on the details of the process, MythBusters focuses on the emotional experience of technical activity. Many builds follow a similar pattern. The hosts sketch out ideas, construct prototypes, discover problems, redesign, and eventually succeed. These stages are represented by scenes that capture the feeling of the activity rather than accurately depicting the details. For example, during the design phase Adam and Jamie will often be shown sitting at a table covered with blue paper, sketching ideas with white paint pens. This arrangement expressively highlights the feeling of designing and iterating through ideas, without delving into the more tedious and less telegenic work of creating measured drawings or calculating strength requirements. Each stage of the process is similarly shown selectively, with a series of moments that illustrate the drudgery, exhaustion, camaraderie, and excitement of building. Other parts of the process that do not contribute to the emotional arc, such as obtaining permits, arranging for fire department oversight, and negotiating with the insurance company, are completely hidden. By hiding the technical detail, MythBusters can better express the drama of the vision of technology that the show exhibits. By presenting an emotionally compelling image of tech-

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nical practice, *MythBusters* becomes part of a larger cultural discussion about the meaning of technical practice.

Over the past decade, a new self-conscious culture of amateur technol-

ogy has developed, often referred to as the "maker movement"; the maker movement combines a critique of a mainstream vision of technology with a commitment to the possibilities of self-taught and self-directed technical activities that closely parallels the vision of technology set out by MythBusters. The maker movement circulates around a loosely defined set of publications, social spaces, and technical practices. The clearest statements of the maker movement can be seen in Make Magazine, at regional and national Maker Faires, and in a network of community workshops known as Maker Spaces. In these contexts, makers show off an array of projects and share a wide variety of skills, but there is an underlying vision of technology that holds the community together. As with MythBusters, makers eschew specialization and professionalization in technical practice. Articles in Make Magazine, for example, often encourage people to learn new skills that might at first seem beyond the reach of amateurs. Makers also revel in transforming everyday objects. Altoid tins become audio speakers, a vacuum can be turned into a hovercraft, and foam board might be the basis for a remote-controlled airplane. Makers also often press the bounds of the scale and complexity that seem possible, constructing hydraulic hands that can crush cars, hot fusion reactors, and balloon-mounted cameras that reach the upper limits of Earth's atmosphere. Finally, like *MythBusters*, the maker movement focuses on the excitement and joy of technical activity. often constructing projects for spectacle or humor rather than usefulness.

For the maker movement, the commitment to this vision of technology is tied to an explicit critique of contemporary technology. They criticize the general culture for discouraging self-taught and self-motivated technical activities. They worry that electronics which require special tools to open and consumer products that cannot be modified or repaired stifle creativity and create waste. Many makers fondly remember tinkering with technology as kids and worry about the future of engineering education in a world that encourages children to be consumers, rather than modifiers, of technology. These critiques are then encoded in the maker movement's vision of technology.

Maker Faires often feature fire-breathing metal dragons, person-sized motorized cupcakes, and synthesizers with banana-based interfaces. The maker movement and *MythBusters* share a similar vision of technology.

The maker movement makes explicit a critique that is implicit in *Myth-Busters*. Both are part of a larger attempt to question the nature of contemporary technical practice. As Adam and Jamie build their strange and wonderful devices, they also give viewers an opportunity to think about the role of expertise, the relationship between creators and consumers, and the

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joy of technical activity. Enthusiastic amateurs have long been important in the development of technology, and though there are common threads, the amateur technical culture of each moment has a unique understanding of technology. *MythBusters* gives us an entrée into the most recent developments of this tradition.