Future Factory: Taking Ownership in our Future of Urban Living

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The future of cities is now; and the people empowering that future of live and work in cities, bringing their energy and ideas to bear on the unique challenges and opportunities of urban life, will be us. We are the future.

As future citizens of the technological world, we are here to contribute to a diverse global community of leaders from business, government, academia, civil society, and startups who will explore the emerging power of cities on the world stage. How can technology transform the lives of citizens? What drives innovation? Where will ideas and expertise rise from next? Who will lead the movement for better, safer, smarter cities? These are the active and intellectual discussions that will drive the future of urban living.

The innovation and development of the Internet since 1989 has allowed the digital practice of architecture to become increasingly geographically limitless and countlessly collaborative.

Online collaboration across industries has allowed innumerable advances within global manufacturing, including design, and thus has facilitated electronic file distribution, allowing for borderless information exchange. However, online collaboration also makes vulnerable the creators and innovators, as they are not protected by the myriad of possibilities for duplication, non-permitted file-sharing, and high-speeds of transfer.

We're interested in the edges between design education that looks to prepare student for the dynamic workplaces of the future, and more importantly to be able to strategically implement the usage of the digital environment during their time at school and throughout their coursework. We're also interested in the edges between the institutions and pedagogy – when and by whom are platforms selected for teaching and learning, and how do administrators' biases and points of view not at all reflect our student demographics?

The field of design can better understand the nature of its multifaceted practice as it considers other practices as points of comparison, such as computer science, music, fashion, economics, and law. How to regulate the various dimensions of applying creative measures into the role of ownership and authorship within design? Considering the many levels of digital property and privacy issues surround today's early millennial students (who are exposed to the access of the digital terrain), a more transparent approach to the developmental years between design education and learning about online communities will allow foundational and intermediate students to have a better understanding of the overlapping interests of the digital world. They will also understand a physical transference of usage rights into the world of design.

Digital learning allows students to fairly easily (and more effectively) bridge across differences in age, race, culture, language, and borders. Digital platforms, such as Slack and Canvas, and generally the

integration of social media into their daily classroom environment, allows students to be savvier with their data. They shift towards having an analytical use of digital platforms, rather than just being consumers of information that is put in the digital world for them. The digital integration of platform learning is an opportunity for the exchange and learning between digital and physical space.

Meanwhile, due to the evolutionary nature and fast speed of digital platforms that change every two to five years, advances between learning from these platforms between the student body and the faculty is also an important pedagogical discourse to further explore. By training students early in their education to understand the various tools that are offered within the digital learning opportunity, both students and faculty members could bridge digital learning across age and practice.

The immeasurable shifts in the profession of design, architecture, and its exponential growth and migration into the digital realm have increased the necessity to evaluate the balance between the ethical and equitable form of design practice. As future creators of the current generation of policymakers, lawyers, social impact entrepreneurs, and most importantly, graduates of the next generation of design students and educators, we are all responsible to take ownership of developing the future of our cities, and question the status-quo on the how we determine the limitations proven by today's digital governance of digital privacy and ownership of data and information.

Existing contemporary notions of ownership and authorship are inadequately conceived to accommodate the environments and conditions of the digital age within the field of architecture and design, and maybe beyond. The present lag in appropriate legal and political treatment of digital ownership risks stifling new and innovative collaborations between various makers and players in the digital realm, especially in the field of architecture and design as it becomes consistently more reliant on digital platforms for production and construction. Further legal and societal ramifications of automation within the field of architecture and construction will continue to require the focused attention of ownership and authorship issues to resolve the questionable ethical divide within the production of digital files and manufacturing of labor with robotics and automated devices.

Society's current notion of fair compensation for intellectual property would benefit from a more developed form of relevant laws that probe deeper into the understanding of how designers and architects operate, beyond the scope of drawing technical floor plans, and examining the holistic practice and industry of construction as it pushes the envelope of technological innovation—such as construction made possible by robotics and 3D printing; practices that currently have no form of legislature policy or governance and regulation. How are our students challenging these changes, and how could we use the processes developed through the years of research apply our variable backgrounds to use?

Professional codes of conduct and legal regulations have become a means to an end of the development of design, as digital barriers lift much of the necessary precautions that are required to be authenticated on the construction and fabrication of three-dimensional computer-aided-design (CAD) files. The Obama administration's goal, which conveyed in a document called a Notice of Proposed Rulemaking, is to modernize federal contracting procedures for the digital age by requiring the use of open licenses on new intellectual property produced with U.S. Department of Education grants. These

open policies present two sides of the coin by introducing a) transparency within the research developed in institutions, and also b) the ability to extort monetary value for the government for the purpose of these inventions.

Congress needs to pay attention to designers and architects, as much as they take note of policymakers and lawyers. The gap between the understandings of design needs from lawmakers is not enough to manage the larger discussion of how legislation should be drafted. Issues of ownership and authorship learned by designers are superficially understood and rarely taken into consideration when the number of drafted materials are made.

Elon Musk's Tesla endeavor and business model is a beneficial launch point to discuss the varied future development of a private, public partnership. Musk and his team at Tesla enabled the process of open sourcing with their battery pack technology, through distributing his patents for 'good faith' use. Good faith, in the context of legal terminology, infers that as long as the product is not commercialized, then the use of the open source technology is found on neutral grounds. However, if the open source technology is used for commercialization or beyond, and feeds into an equitable and economic agreement, then Musk and his team have the opportunity to renegotiate the licensing and versioning rights of the products developed on top of the open source technology. This model opens private partnerships to gain public interest in the development—a co-beneficial model beyond the traditional corporate structure, but also, craftily, it produces a dialogue between various parties at play, including the general public who could very well be designers and innovators, many academic institutions, other automotive brands. Musk and Tesla have the opportunity to reach out to innovators that would like to get their hands on the Tesla technology, and potentially strike a larger deal with the data and information that is grown through the technology itself. Information no longer becomes a means of business; it has become itself a business commodity. This type of business policy strikes both the public policy realm of economics, but also pushes the envelope of a future and emerging field of design thinking beyond the traditional form of studio work that is generated within architectural and design studios.

Designers are required to harness a different type of skill-set that no longer solely works in a vacuum, within their own technological savviness, but also are required to collaborate, interrogate, and more significantly, incorporate various means of technologies from various other fields of development. Moreover, due to this collaborative nature of incorporating various types of technologies and innovative designs from various brands and other fields, designers and architects are, therefore, more than ever before, required to explore, understand, and learn their rights of ownership and authorship.

As the creators, makers of the future, more significantly, the future of education in the field of design, through policy, law, impact, design, research, science, or whichever hybrid means of setting the bar into the next generation of motivators in the built environment, we will consider taking further ownership into the future of urban living.