



Shelter In Place Convertible Poncho

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Contextual Review & Concept:

Imagine a world where your every action is monitored, all your possessions are confiscated and whatever freedoms you possessed no longer exist. This is the reality of “The Runners.”

This project was designed as part of a collection developed by graduate students for a fictional future scenario called “The Runners.” Our “heroes” live in a dystopian society in which a corporation rose to power by consolidating the entire population into one workforce. The cities that once existed are abandoned and the lifestyles of the citizens are restricted. They are not allowed to leave the corporate centers, they cannot play sports, and all recreational activities are eliminated.

These “Runners” revolt against these restrictions and sneak out to abandoned locations to take part in the activities deemed illegal. The Shelter In Place Convertible Poncho, inspired by hunting blinds, was designed to avoid detection and capture by the corporate power’s police force and provide shelter, coverage and protection in an uncertain, unpredictable environment.

Significance, Rationale & Contribution:

The reality is that the Shelter In Place Convertible Poncho has potential for more than just a fictional population. The homeless population shares much in common with The Runners, and The Shelter In Place Convertible Poncho could be of great value to those who do not have access to a shelter. Covid-19 has drastically exacerbated the conditions experienced by homeless people, and particularly those vulnerable to inclement weather and crowded conditions such as those in urban communities like New York or Chicago. As the infections spread, state and national governments ordered citizens to “stay at home,” “socially distance,” and “shelter in place.” By requiring citizens to stay inside, the hope was that the disease would be contained. But how can you stay home if you don’t have a home?

It is estimated that there are 500,000 single adults currently homeless in the United States (Chen, 2020). This population is at a heightened risk of contracting the virus and experiencing serious complications due to a number of factors. Shelters are often crowded. The CDC recommends six feet of separation between individuals to reduce the spread of the virus. A congregate setting like a shelter, with communal sleeping & eating areas and shared bathrooms, gives the virus that many more opportunities to spread. Those that don’t enter shelters often have no access to soap or disinfectants that kill the virus. (Chen, 2020). This demographic also has a higher number of older adults, many of whom have underlying and often untreated medical conditions (Homelessness and COVID-19 FAQs, 2020).

Ironically, at a time when humanity is struggling with its health, so is our planet as a whole. Faced with climate change, extreme weather conditions, polluted water sources and reduction of natural habitats and resources, measures must be taken to manufacture products sustainably and responsibly.

A single use plastic bag is estimated to take around 20 years to degrade. The impact on the the environment is costly as the bags often end up polluting water and breaking down into micro-plastics which are ingested by marine life (Wright, 2018).

In a perfect world the manufacture of new plastic would be limited, and the plastic that exists would be recycled into new products. This one product could solve two problems at once: provide the homeless population with shelter and protection during a pandemic while utilizing existing single use plastic.

Aesthetic & Visual Properties:

The intent of this product was to create a multifunctional item that would help “The Runners” avoid detection, be easy to don and doff, use found materials, have storage features and function in an urban setting.

Trash is everywhere and would provide a good source of material if the Runners could figure out how to repurpose it. Garbage bags were found to be the most versatile single use plastic product that was easily accessible and abundant. They were pliable and easily manipulated and could be used to create a textile inspired by the shelters and the garments hunters wear to stalk prey. The garbage bags could be shredded and layered to create a graphic design that mimics camouflage, where the abstract shapes break up the outline of the wearers and allow them to blend into their surroundings.

The final design consisted of a shelter that could be worn due to the drifter lifestyle of The Runners which required the structure to be highly portable and double as both a bag for storage as well as an outerwear piece for protection from the elements and exposure.

Process Technique & Execution:

Prototyping focused on developing a technique for adhering the trash bags to a cotton base fabric using heat and pressure. Various materials were tested including different weights and colors of plastic bags as well as adhesives and bonding materials.

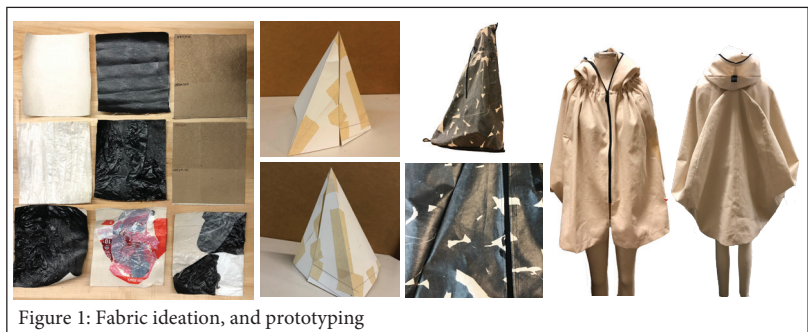


Figure 1: Fabric ideation, and prototyping

Some plastics disintegrated or shrunk under heat. Some did not adhere. The materials needed to be both functional and aesthetically interesting. The next step was to create a miniature prototype to confirm the concept and construction. A full-scale muslin was then made to test fit, proportion and functionality. The final product is a tent with a full-length zipper at the front that converts into a hooded garment. A back pocket opens to a hidden backpack at the interior side. This bag also fully reverses into an over-the-shoulder drawstring bag.

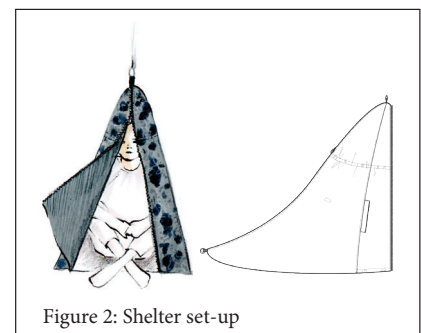


Figure 2: Shelter set-up

Cohesion & Design Contribution:

This project was the result of creatively fulfilling an assignment that aided a fictional group of people to improve their situation where their freedom was being restricted by an authoritarian ruling party. The product is very relevant to our current situation today in a world where covid-19 exists. The convertible shelter to a jacket using recycled materials is a concept that should be explored for those that don't have the luxury of sheltering at home.

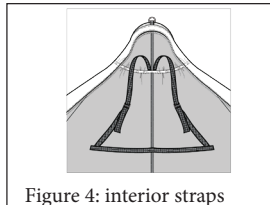


Figure 4: interior straps

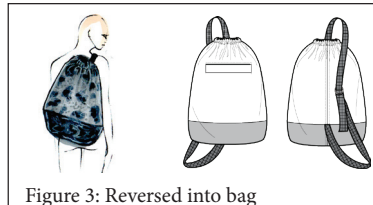


Figure 3: Reversed into bag



Figure 5: Worn as poncho

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