Jailine Collado

Smart textiles can be described as passive smart, active smart, and very smart. Passive smart textiles there are no electronics involved in these fabrics. All of its functions will allow it to remain in a static state the entire time it is worn; passive smart textiles can prevent static cling. These textiles can be sensitive when properly designed to temperature, humidity, light, and pressure. Ministry of Supply and the Self Assembly Lab at MIT collaborated on a passive smart sweater that can adjust its size in response to heat. Skylar Tibbits the founder of the Self Assembly Lab prides himself in wanting to be active and smart but passive in the sense that it is all based on materials as opposed to being battery-operated. The sweater can be mass-produced in standard sizes but the customization process happens in-store instead of during the production process using an in-store robotic machine that will use a heat gun to adjust the sweater to the consumer's true size (Schwab, 2018). Because I am someone whose weight fluctuates I am thoroughly intrigued by this technology battling between being an xs and s, it is appealing that the garment is able to be fit and tailored to my body perfectly.

With active smart textiles, these fabrics will change to adjust the conditions of the person who is wearing said fabric. These fabrics actively do things to make the person wearing these fabrics life more comfortable or convenient rather than the fabric itself being what makes it smart as a passive smart textile does. LOOMIA is an example of active smart textiles. active textiles adapt and change their functionality in response to the external environment. These materials produce an "action" as a result of the information obtained. LOOMIA LEL Loomia Electronic Layer was integrated directly into the garment, providing a subtle yet comfortability for the wearer. This is an exciting development, as this technology could one day be used to help the elderly and those with medical conditions stay warm as well as providing the technology for an affordable price. What I am most interested in is the production of the electronic layer (LOOMIA, 2022).

Very smart textiles react and adapt themselves to environmental conditions or stimuli. An example of this will be JanSport's collaboration with AFFOA. Advanced Functional Fabrics of America (AFFOA) is a public-private partnership, working to develop and introduce U.S.-made high-tech fabrics that provide services such as health monitoring, communications, and dynamic design. The fabric allows the wearer to program their backpack through an app called "looks" to associate, pair, and share information through their backpack. Including the students to make better connections on campus along with networking with their peers, and storing memories and information. It can also be programmed to notify its owner if it gets lost, which is not only convenient for younger students but for everyone. I would be willing to purchase this product especially if it can be programmed to use with their tote collection because personally, I enjoy a tote bag more than a backpack. As well as introducing mini bags into their collection (Chandler, 2017).

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