

# AFFORDANCE THEORY IN DESIGN

ARCH11249 INTRODUCTION TO DIGITAL DESIGN, ASSIGNMENT 1 REPORT

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MSc. Digital Media Design, 2020

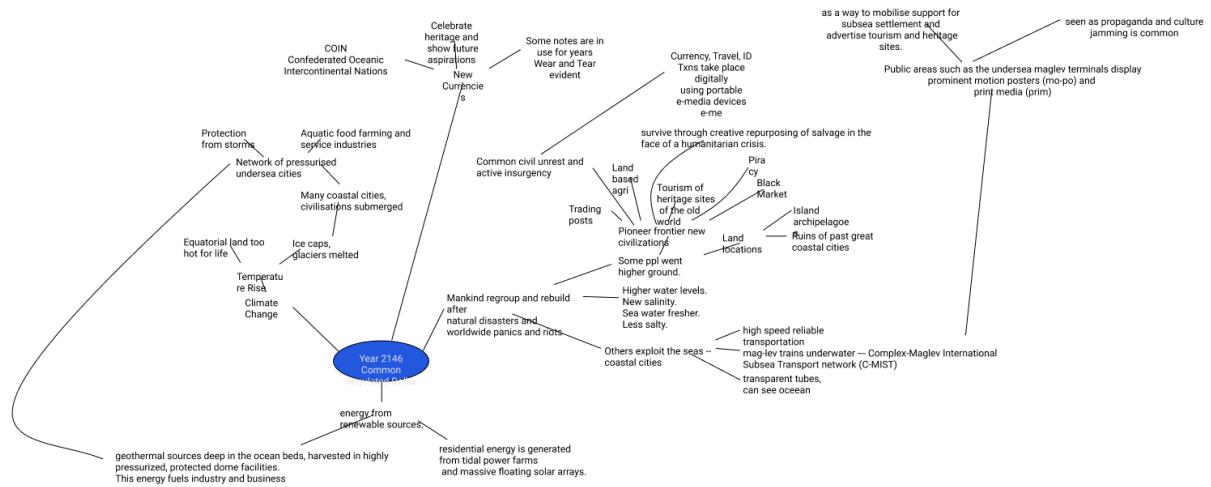
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## **ABSTRACT**

How would government design everyday things? How would they assert their power and influence? How would society respond and react to symbolisms? Those are some of the questions I have when designing the Eastern Seaboard's currency, travel documents and propaganda posters. Inspired by Affordance Theory and Design Thinking, I demonstrate the methods to design the artifacts for the Eastern Seaboard government, and why any designer should use Affordance Theory to design everyday things.

## INTRODUCTION



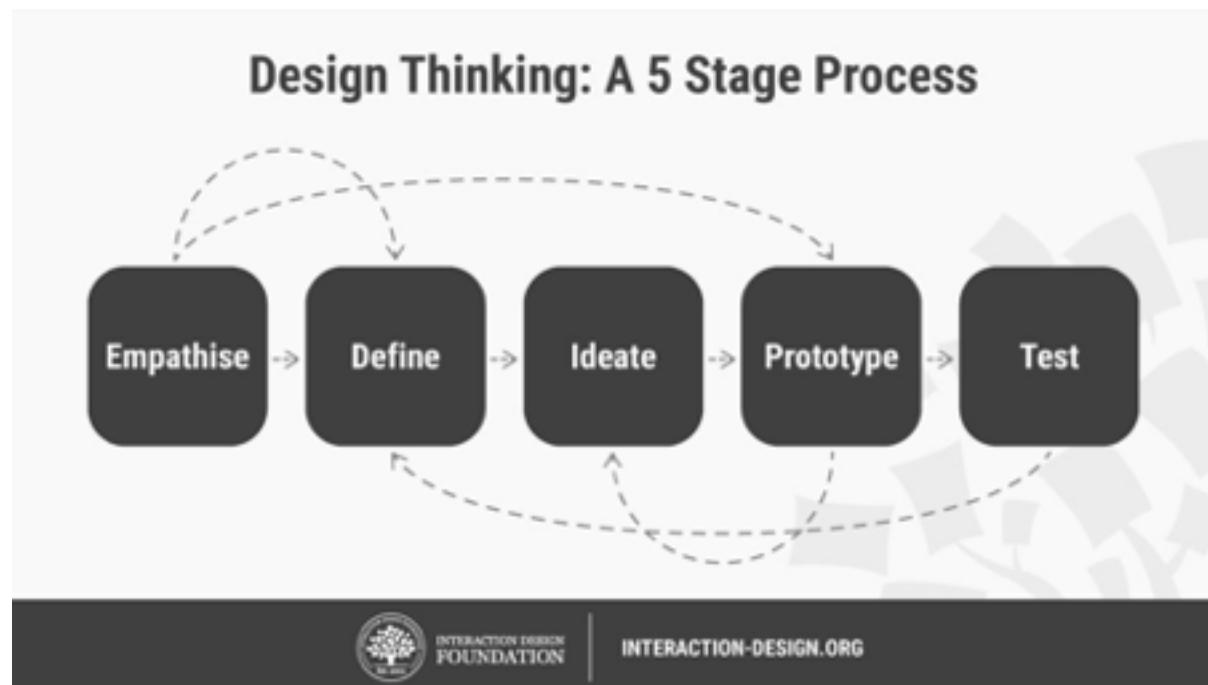
Before I started, I crafted a mind map from the brief to generate keywords for the backstory. In 2146, humans will use sustainable energy from renewable sources like tidal power farms, floating solar arrays and ocean-based geothermal sources. Nuclear power was abandoned and dependence on oil reduced. From this, I deduced that a Eurozone-like global confederation of sea-based nations were built on top of former land-based nations.

Assigned the Eastern Seaboard, I researched into the culture and history of the region, especially Boston, due to its political historical value. The regional government would use history as inspiration to galvanise her people and create stability in an uncertain world.

## METHODS

I used qualitative methods of historical research, design thinking and Affordance Theory to design the Eastern Seaboard artifacts.

### DESIGN THINKING



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Symbols have political power. What symbols inspire Eastern Seaboardians? What emotions would citizens feel when they interact with the artifacts? Using Design Thinking, I imagined myself as a futuristic artifact designer.

## MOOD BOARD



A mood board was made with Boston and New York-related pictures focusing on a charismatic historical figure. Historical figures would inspire citizens. (Chang-Cooper, 2020)

I learnt that President Obama and First Lady Michelle Obama attended Harvard and made them the protagonists for my bills. They were a progressive and popular first couple and represented a time the Eastern Seaboardians would reminisce. I used the central theme of "Hope" for the design, which was Obama's campaign theme.

This is how government use history for their benefit. (Orwell, n.d.)

## AFFORDANCE THEORY

Lastly, how are the artifacts used? Currency is digitised and people will use e-me devices to interact with them. Using Affordance Theory, I designed the artifacts that makes interactions intuitive.

"When affordances are taken advantage of, the user knows what to do just by looking: no picture, label, or instruction needed." (Norman, 1988)



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Imagine seeing chopsticks for the first time. Would you know its purpose and usage method? Affordances, real or perceived, are influenced by the user's culture and knowledge and I must be sensitive to them.

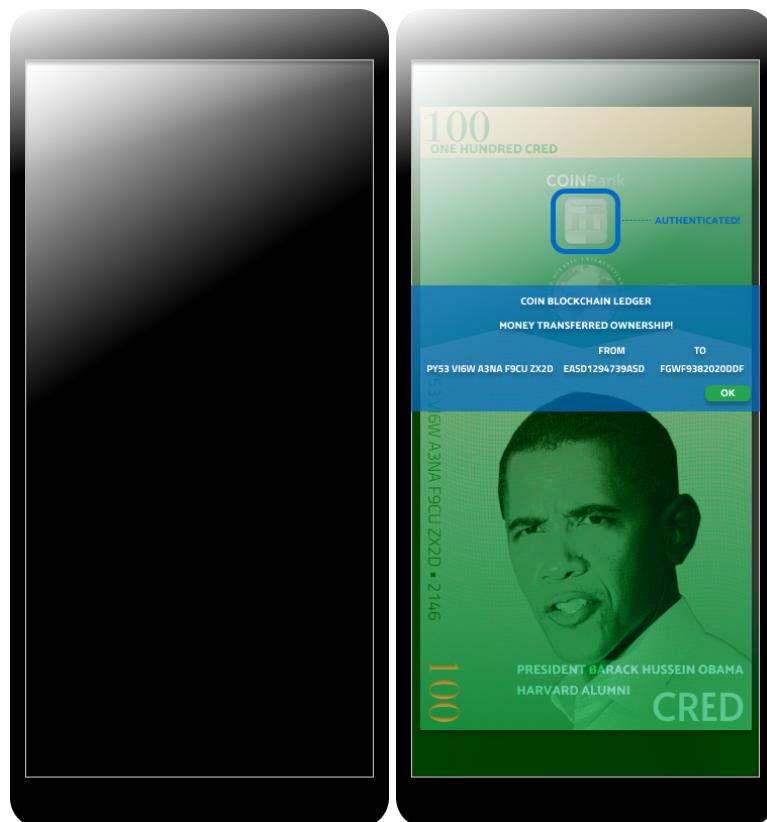
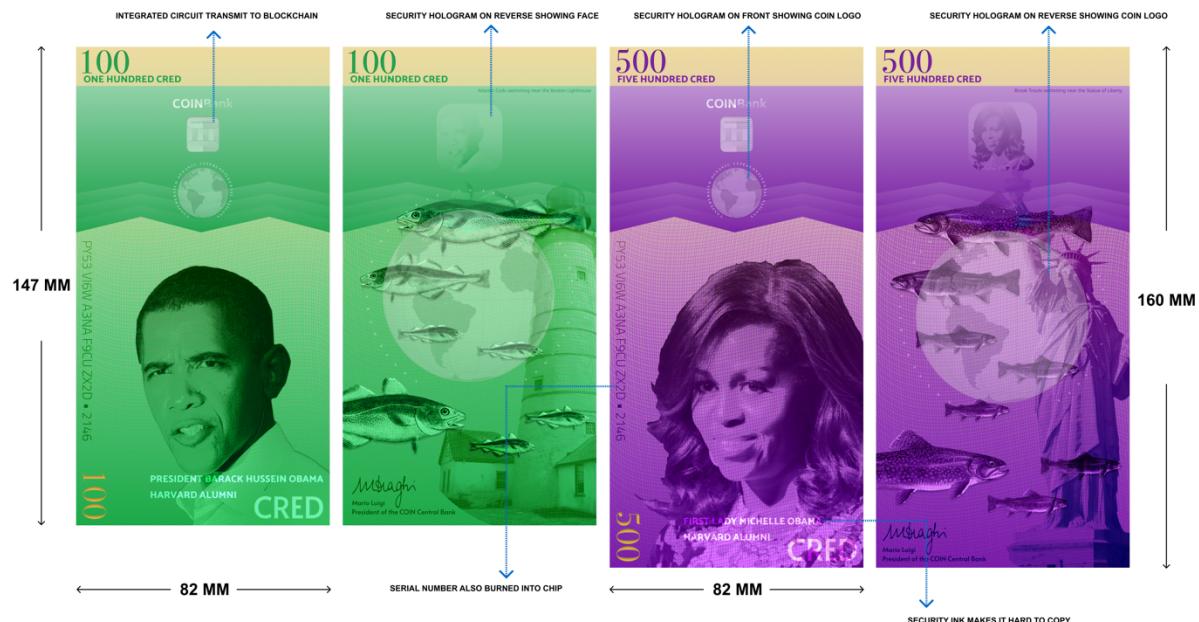
## RESULTS

I produced the designs from my mood board. I thought about their manufacturing standards and materials. I used the Euro design language and metric system as the standard due to a change in the sphere of influence.

I based the Five CRED on €1 dimensions and the Ten CRED on €2 dimensions. (European Central Bank, 2020) . However, coins will be made of metallic polymer plastic reducing precious metals usage similar to the German €5 released in 2016. (Sparrow, 2015)

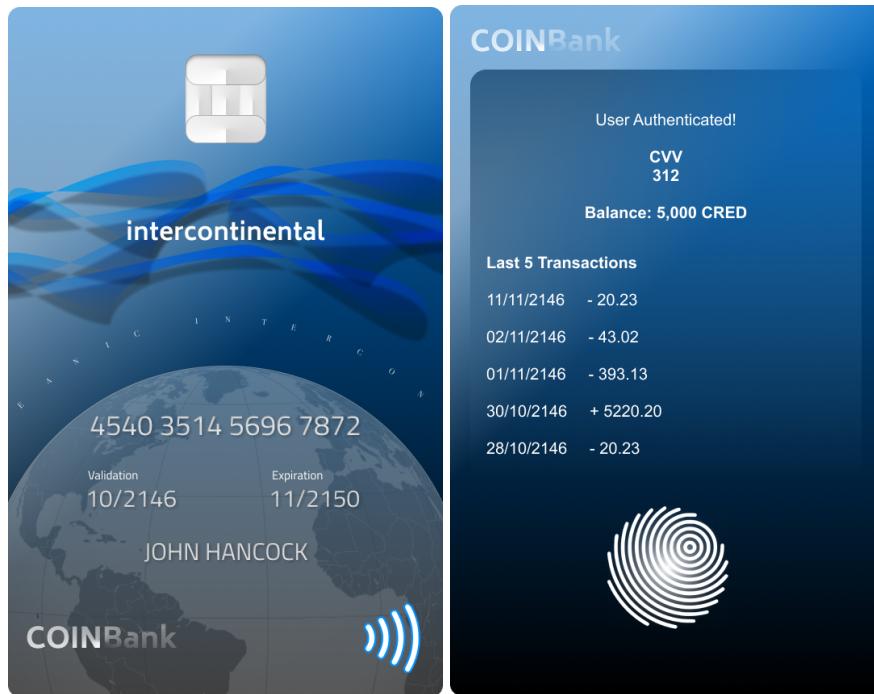


Bills will be in portrait, making it look suitable for e-me. Polymer plastic will still be used due to its recyclable nature. The 100 CRED note follow the €100 dimensions and 500 CRED follow the €500 dimensions.



Currency embeds circuitry allowing it to transmit Bluetooth signal to the e-me device when currency changes hands. The integrated circuit exists in both coins and notes.

Bank Cards contain biometric security to authenticate owners when making transactions.



Metro card-shaped CMIST Travel Pass replaces traditional passports for travel and identity documentation. Biometric authentication validate the owner when travelling and to reveal travel history.



Propaganda posters were inspired from Uncle Sam military draft posters in 1917. Avoiding the use of weapons, the poster evokes a sense of calling to remind Eastern Seaboardians what they are protecting. The call to action are supported by a QR code that will lead the observer to the COIN Defence Force careers page. Social Media and web URLs are also available to guide the observer to the landing page.



"I Want You for the U.S. Army" by MCAD Library is licensed under CC BY 2.0

## DISCUSSION

The currency was designed for interaction between physical and virtual realities. How would physical currency interact with e-me, and how would it be represented on screen?

Affordance Theory influenced me to design the artifacts in an intuitive way. Money forms have not changed for thousands of years because it works without explanation. Similarly, bank and CMIST cards in the 20<sup>th</sup> century would be evergreen in 2146.

The futuristic elements were subtle. Physical currency is tracked on blockchain. Integrated circuits would emit signals to e-me when transactions happen. Bank and CMIST cards embed biometric authentication to validate identity and transactions. This would be a corruption-free world. It would be difficult to steal cash physically and digitally and your financial trail is tracked.

This Orwellian element forms the back story of the rebels that resist these technological eavesdropping disguised as progress. While the use of the Obamas and Harvard, gives her citizens aspirations and pride.

## CONCLUSION

Affordance Theory was helpful to design something futuristic. It helps frame design questions for what could be, and grounds designers to think about patterns that would still be consistent in the future. It also forces you to be sensitive to user's culture. Affordance Theory was the right solution to use.

(793 Words)

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Globe forming part of the COIN Confederation Logo (Found in Coins, Notes, and CMIST card)

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[https://commons.wikimedia.org/wiki/File:Globe\\_centered\\_in\\_the\\_Atlantic\\_Ocean\\_\(green\\_and\\_grey\\_globe\\_scheme\).svg](https://commons.wikimedia.org/wiki/File:Globe_centered_in_the_Atlantic_Ocean_(green_and_grey_globe_scheme).svg)

Lady Liberty (Found in Coins, Notes, and Poster)

Statue of Liberty By Dominique James / CC BY 2.0

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Barack Obama (Found in Notes)

Barack Obama delivers a speech at the University of Southern California By Ari Levinson (Autumnfire), minor cleanup edit by Chicago god. - Own work, / CC BY-SA 3.0

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US First Lady, Michelle Obama, speaking at Mulberry School for Girls, London by DFID - UK Department for International Development / CC BY 2.0

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The signature of Mario Draghi, the President of the European Central Bank, on the Euro banknotes. By User:Ssolbergj / CC BY-SA 3.0

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Fingerprint Icon (Found in Bank Card and CMIST Card)

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## Supporting Images in Report

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