

## **Case Study B, *Western Mexico Collection: Effigy Bowl***

Cultural items that have entered into another country after being stolen or without the proper export documentation are in a unique spot in that others may not want to purchase the items due to the fear of an outside party claiming to be the actual owner of the item. However, these situations may lead to important cultural items becoming devalued, especially if the source country does not wish to repatriate the item. The international community has recognized the unique concerns of the art community, implementing the Hague Convention Protecting Personal Property in 1954, which protected cultural artifacts during wartime. A 1970 Convention of UNESCO covers the protection of cultural items during peacetime. However, there are many situations not covered by the 1970 treaty, such as items that were stolen before the Convention went into force, and the treaty is only binding on states that join it. Since the nature of the problem requires an international approach in an area of practice that is currently not very clear, a smart contract is a solution that allows states and other communities contractual ownership. When developing our smart contract, we kept in mind the UNESCO treaty standards of who has rights to cultural items. While not every state has joined the treaty, we wanted to keep these standards in mind to create a type of agreement that is most universally applicable. The benefit of blockchain is that it is decentralized, and people can access their rights more clearly and easily. A decentralized, highly automated smart contract is a beneficial solution since the current more-centralized legal approach using the UNESCO treaty requires much human interaction to deal with the inevitable gray areas. Our selection process for this project ultimately came down to the idea that everyone deserves a piece of the pie. Too often, ownership and revenue in the art world tend to be inequitable.

Blockchain technology allows ownership to be fractionalized and even allows for different legally-intertwined concepts, such as ownership and possession, to be separated. This separation is something that courts have sometimes had to disentangle, but blockchain allows the concepts to be distinct. A large problem with conflicting ownership claims is the question of where to house the item while ownership claims are being decided. Items that are transferred to different locations suffer wear and tear, which is not beneficial to any party involved. Separating ownership and possession rights allows for a new claimant to arise on the scene without needing to change the location of the item since the ownership and possession rights are different.

Blockchain technology also allows for safer transactions. The chance of fraud is reduced due to the nature of blockchain, and someone cannot go back and change earlier records of ownership or transactions. Another important benefit is that the technology can make it harder for terrorist organizations to use the sale of fraudulent or stolen art to fund their illegal activities. To move forward more seamlessly, governments must have trust in the new system. Blockchain's record-keeping will allow the governments to have more faith in the system since the records show the history of the object. The money from transactions should not go into terrorist organizations or drug trafficking, so moving to a more secure form of transaction will make it harder for the art to be used for nefarious purposes.

After researching the many benefits of blockchain technologies, we decided to implement a smart contract to solve this problem. The first step of implementing a smart contract is defining the ownership of the Effigy Bowl and putting a digital tag on it that contains this and other information.

The second step is deciding how both stakeholders will share revenue based on external factors like housing, profits related to the exhibition, and the ability to share profits with other

stakeholders. We also included a brand new cryptocurrency called Museumcoin, which gives the general public an incentive to visit the museum.

Our blockchain-based smart contract API is modular, dynamic, and highly scalable and a solution that meets the needs of every stakeholder. First and foremost, our solution is based on Ethereum which is a public blockchain: accessible to all, with lower transaction speeds, energy-intensive, public records, anonymous participants, with mining incentives. However, our solution relies on cross-chaining, so depending on the needs of the client, we can deliver a permission blockchain. Recent advances in cross-chaining technology allow us to communicate with different types of blockchains by block chaining a blockchain, or by including a snippet of code to establish compatibility.

It all starts with an owner and an artifact. Our API generates a unique identification number for a given artifact that is stored in a blockchain. This unique identifier stores valuable information such as the proof of origin, number of artifacts/pieces created, and ownership information. Every stakeholder in this decentralized network - owners, museums, art collectors, curators - can read entries into the blockchain. Thus the whereabouts and provenance of an artifact in our database, unless specified otherwise, is public to all parties in the database. For example, all museums would have access to the origins of an item they are interested in hosting.

## Effigy Bowl

Title

# of works

Unique Identification Number

Size & Dimensions

## **Proof of Origin**

Owners will be given a unique private key that allows them to update information about their property when necessary, such as when an object is sold and keys are transferred between owners. Owners also have a cryptocurrency address for receiving Ethereum based tokens. Ownership structure cannot be altered other than by the current private key owner, under fractional ownership, decisions require a unanimous consensus. Any museum can use this system.

The benefits of using blockchain as a decentralized financial system and a ledger to maintain provenance details not only allow for fractionalized ownership but also lowers the likelihood of distributing forgeries since our solution allows proprietors to maintain an unalterable record built around their inventory. If a third-party wants to update a contract in the database to reflect a change in circumstances, the transaction has to be accepted by all participants. The desired change is either not done at all or completely applied. In this way, changes are always approved by all parties involved.

We don't pretend to be a judge, jury, and executioner: we realize that an object's ownership is not static, so we make sure users of our registry involved in transactions consent to the jurisprudence of the object's source country, save for instances when the contracting parties may elect to add a choice of law provided for the laws of another country, i.e. if a nearby country has more developed law in the area of lost cultural property and art and is more used to these sorts of claims. Furthermore, the contracting parties may elect to add an arbitration clause and have the disagreeing parties attend an arbitration in a third-party's country and potentially use the third-party's applicable laws. In instances where a country is war-torn or when the source community that created the item no longer resides in the territory where the item was discovered,

a different country's laws may be more applicable and more justly applied than the source country's laws, so a choice of law provision is necessary when contracting with these states.

## **Ownership**

Per UNESCO regulation, the Mexican government has a claim of ownership to the artifact due to the artifact originally being found within its borders. However, the community within Mexico also has a cultural link to the object, and thus obtain ownership rights to the title, the Mexican government's ownership rights - which acts as a proxy for the source community - to allow the Mexican community to retain some source of ownership.

Mexico is the first owner of the bowl. Our technology ensures that fact remains non-negotiable. However, if the owner wants to sell to a private party, museum, or similar institution, whether through auction or private sale, the owner agrees to either negotiate the sale's smart contract through our solution or allow us to cross-chain records over to maintain provenance continuity.

## **Profit**

Fractional profit goes to multiple stakeholders, but ownership stays with the Mexican Government. The amount of profit that the stakeholders receive will be negotiated in advance. By utilizing the Ethereum-based cryptocurrencies, stakeholders can exchange revenue in a liquid currency while allowing both parties to eliminate the need for a middleman and have all the transactions recorded and executed through the blockchain network. This provides more flexibility as the stakeholders will be able to convert crypto to their preferred currencies - be it pesos, dollars, or other cryptocurrencies.

Additionally, The Museum of Anthropology at Wake Forest will offer incentives via Museumcoin to encourage ticket sales. The Museumcoin will give tokens to individuals that purchase tickets or merchandise. Attendees will be able to choose to cash out their Museumcoin or donate it to the museum - or the owner of the artifact if she's on a public blockchain - of their favorite artwork. Museumcoin also stores data based on the museum's ticket and merchandise sales, This gives the stakeholders the ability to measure and interpret data, which is used to determine whether the smart contract was effective and functional. The value of the tokens given will be less than the cost of the entrance ticket, where the cents spent on "manufacturing" these tokens will be offset by an increase in revenue. Museumcoin can be crowdsourced to local organizations like museums, non-profit organizations, and charities.

### **Possession**

Although the ownership resides with the Mexican government, blockchain technology allows for the ideas of ownership and possession to be fractionalized, modified, and constantly adaptive. While the Mexican government owns the Effigy Bowl, our smart contract would give the Museum of Anthropology at Wake Forest the right of possession. In general, however, after the completion of any smart contract between an owner and a possessor, there is an open auction to determine future possession rights.

In this situation, the stakeholders are the Museum of Anthropology at Wake Forest University and the Mexican government. The solution takes into account the differing needs of all stakeholders. The Mexican government receives revenue rights transparency, while The Museum of Anthropology at Wake Forest University can display and profit from the Effigy Bowl without the burden of acquiring the objects unethically.

## **Due Diligence**

Due diligence requires potential owners to research the previous owner to make sure that they are not purchasing fraudulent items. With blockchain technology, the previous owner of the items is very easily discernible, so it makes the due diligence search simpler and more accurate. Regarding export restrictions and local government regulations, potential buyers are obligated to make sure, as far as possible, that the items that they are purchasing came into the country in conformity with the import/export regulations and with the required permission of the source country's government. Blockchain technology allows for the item's history to be recorded and prevents fraud.

## **Breach of Smart Contract**

Penalties for breach of contract may include a change of possession (in egregious instances), which would be covered in the smart contract in the instance of breach. In more minor circumstances of the breach, such as if the Museum of Anthropology at Wake Forest is not taking proper care of the item, the penalty will be fine.

## **Works Cited**

Thomas Crown Art. "FAQs." *Thomas Crown Art*, [thomascrown.art/pages/faqs](http://thomascrown.art/pages/faqs).