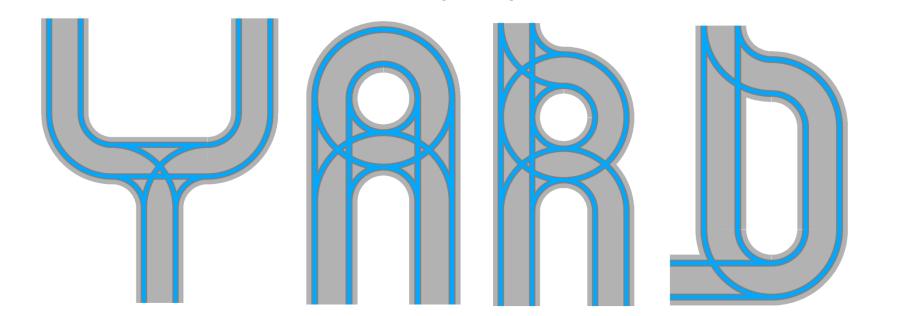
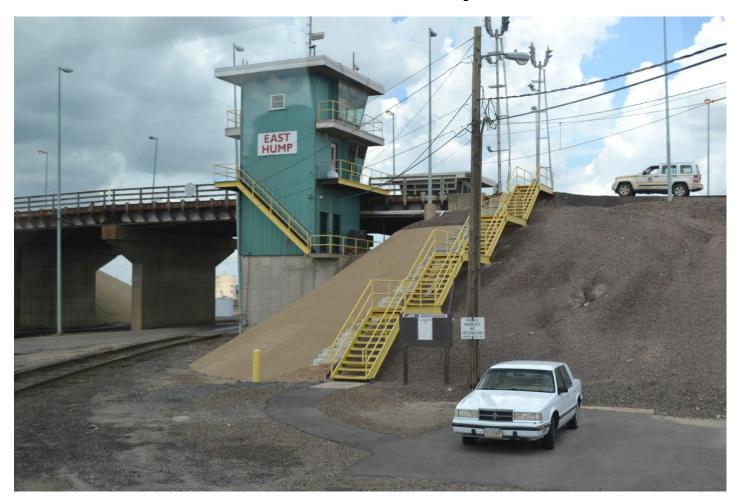


A Board Game by Bryce Summers

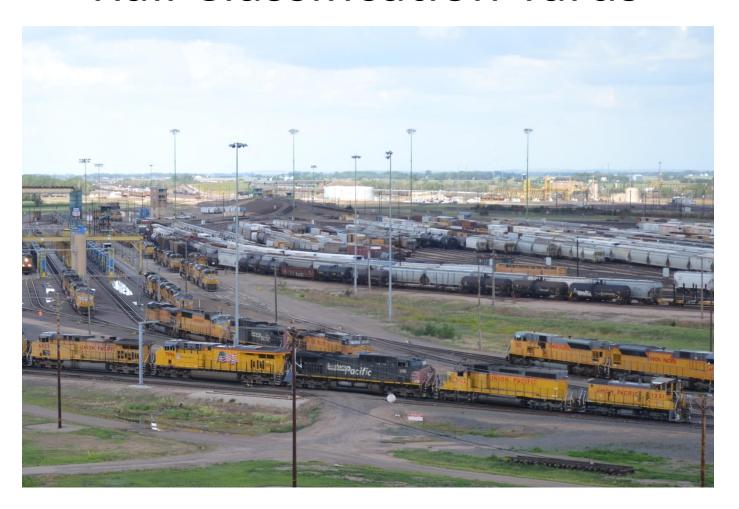


## What is a Hump Yard?



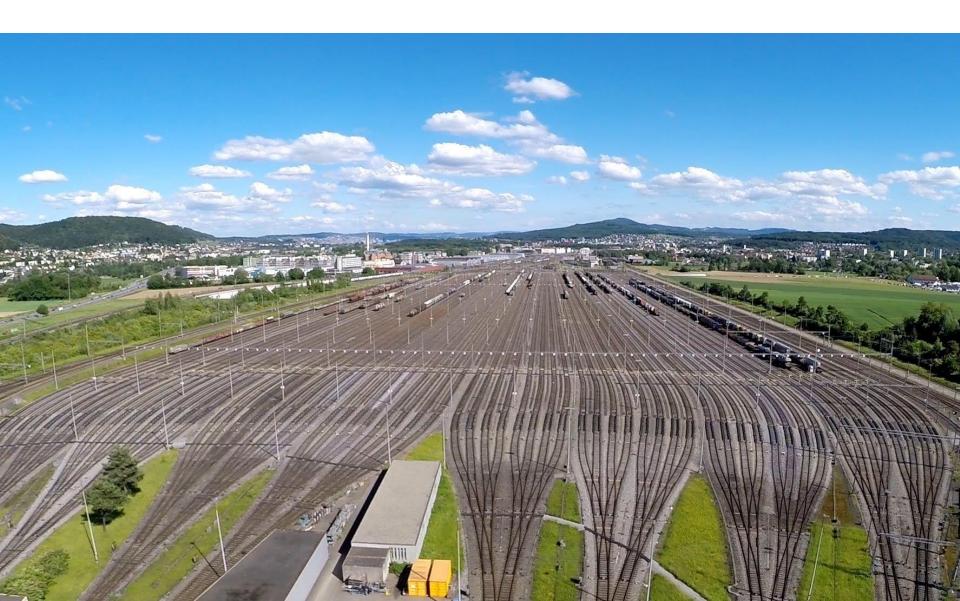
# A HUMP IS A HILL!

#### Rail Classification Yards



# YARDS SORT TRAINS!

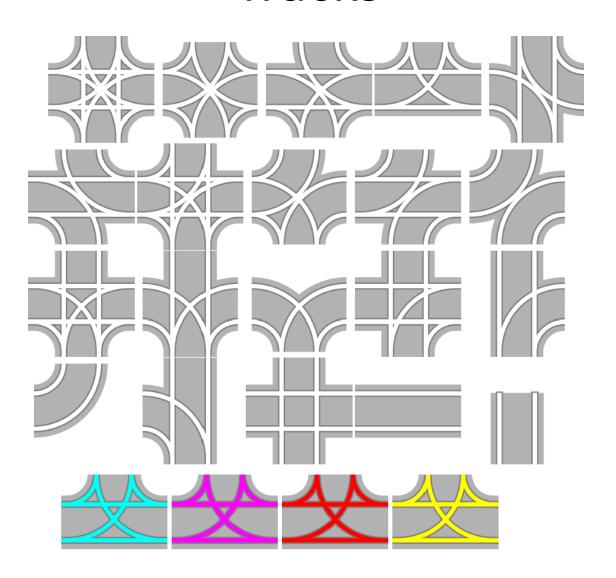
## **Gravity Based Sorting**



# Hump Yard, the Board Game



### **Tracks**



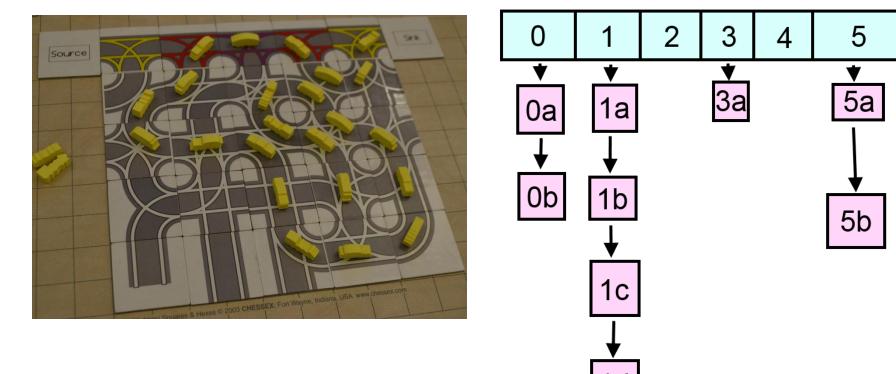
## Rolling Stock Cars go on the Tracks



### Analogue for Data Structures

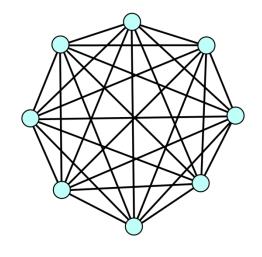
Cars on tracks

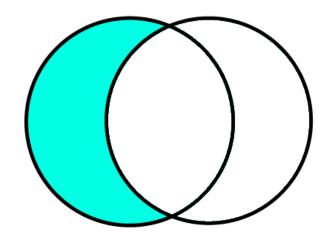
Data in a Data Structure.

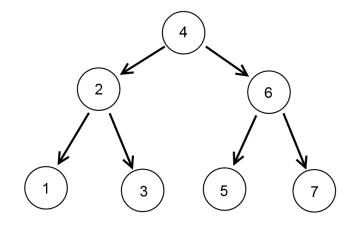


#### What is a Data Structure?

0 1 2 3 4 5 6 7 8 9 10 12 13 14 15



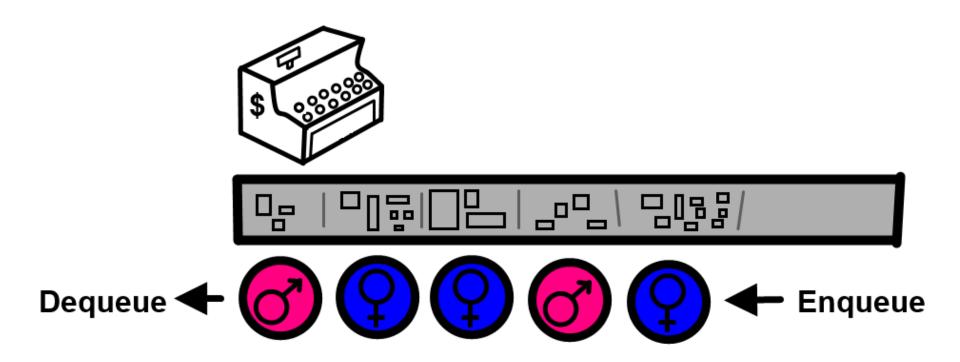




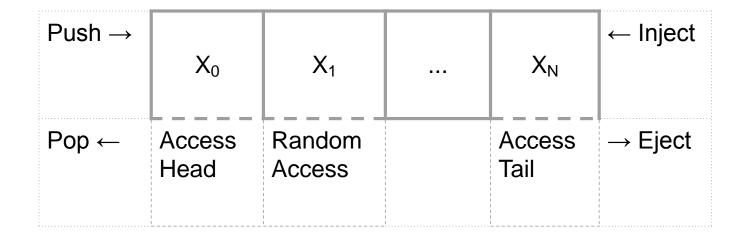
## **Grocery Shopping Stacks**



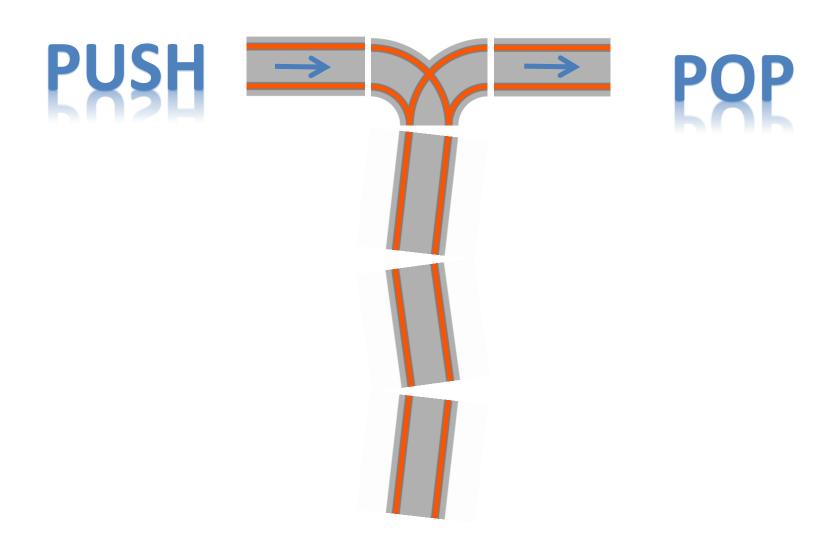
### **Grocery Shopping Queues**



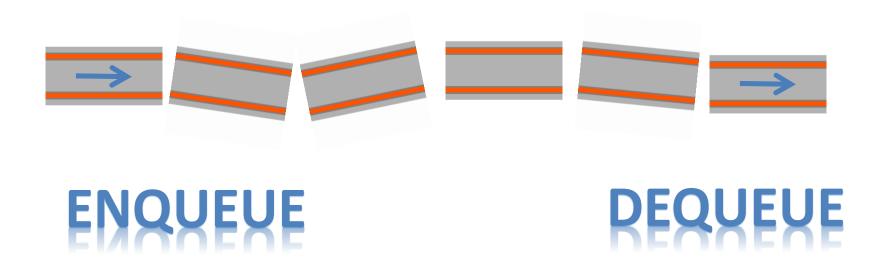
#### Computer Science Dequeues



## **Hump Yard Stacks**



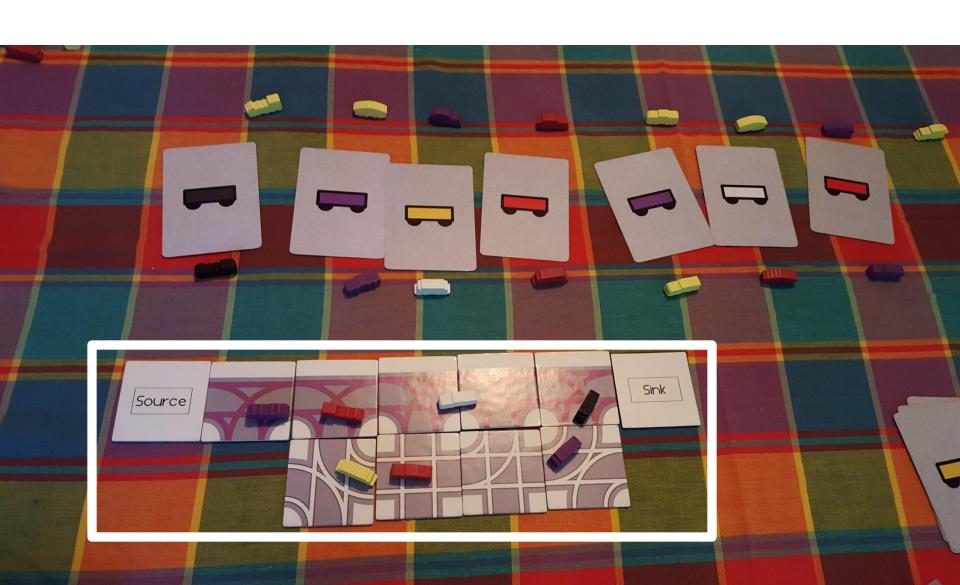
#### **Hump Yard Queues**



# Game Play



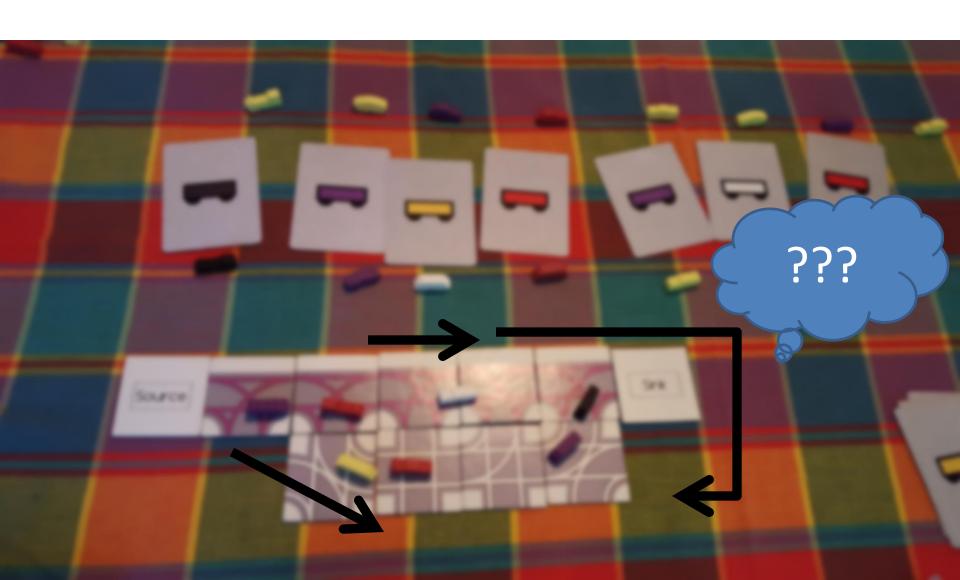
# **Build Tracks**



# Contracts (What goes in)



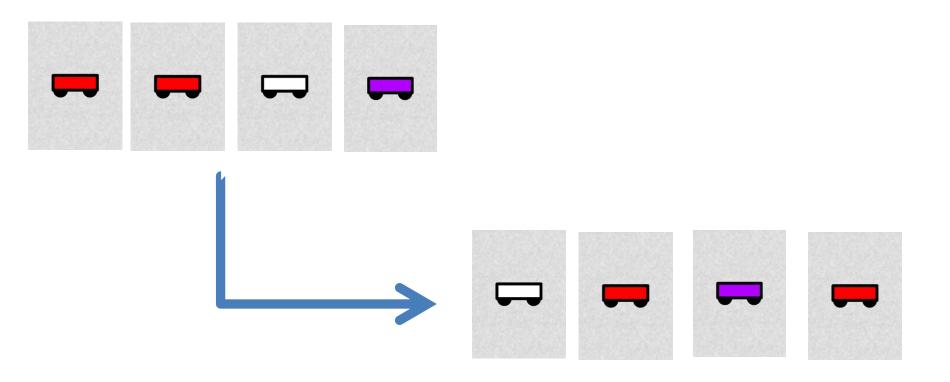
#### Bidding (Who can sort most efficiently)



## Random Shuffle (What comes out)

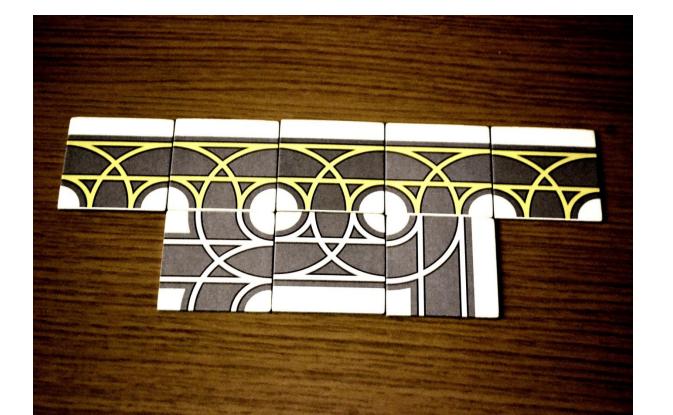


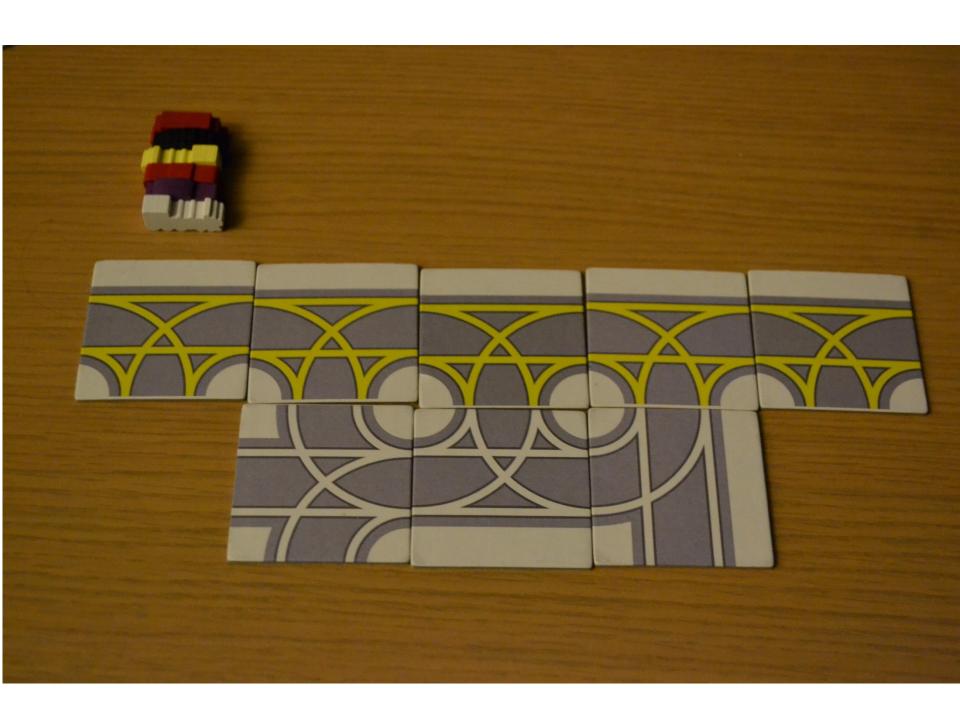
# Sorting

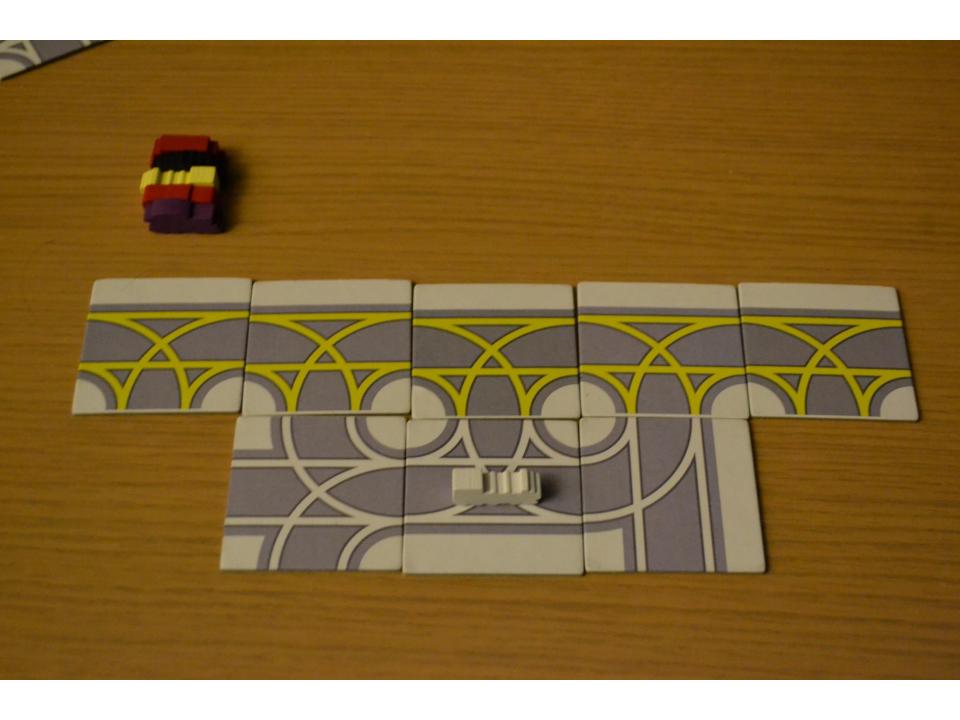


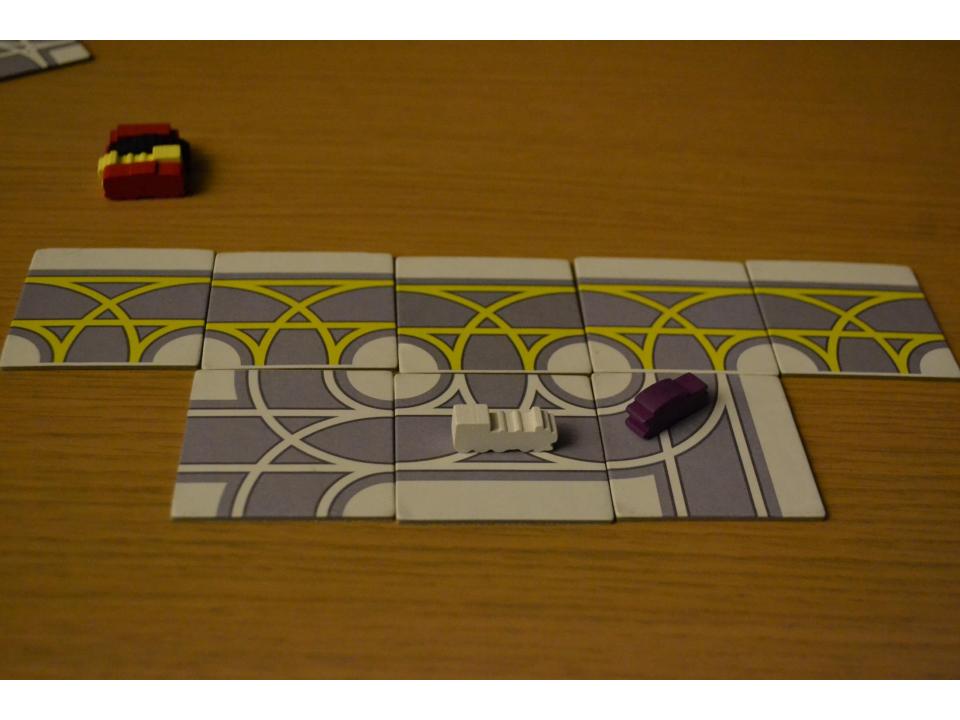
#### Dramatization

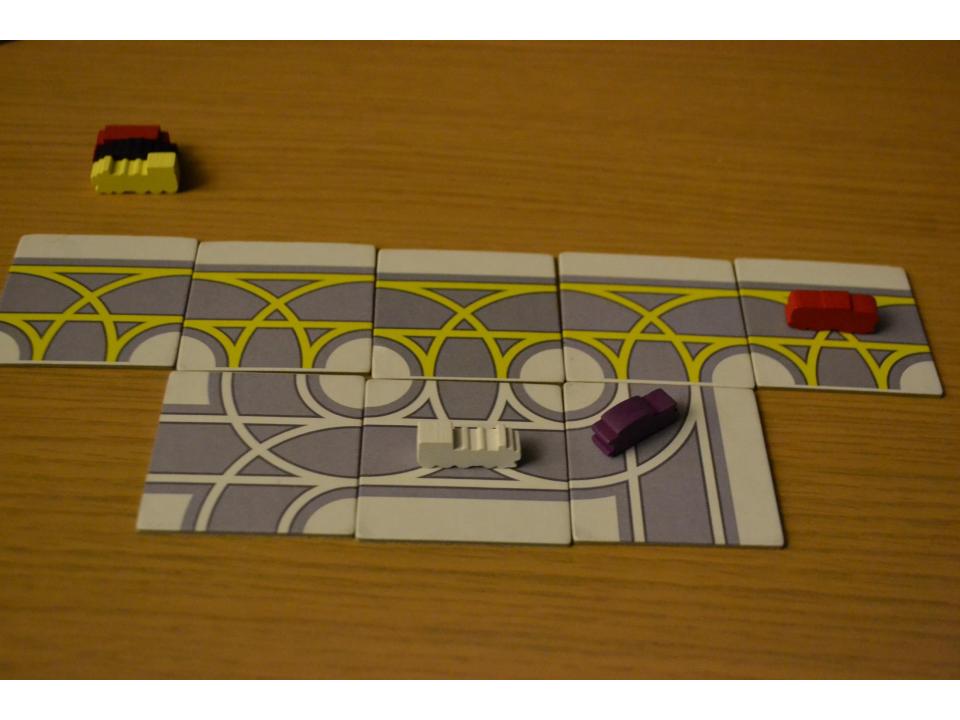


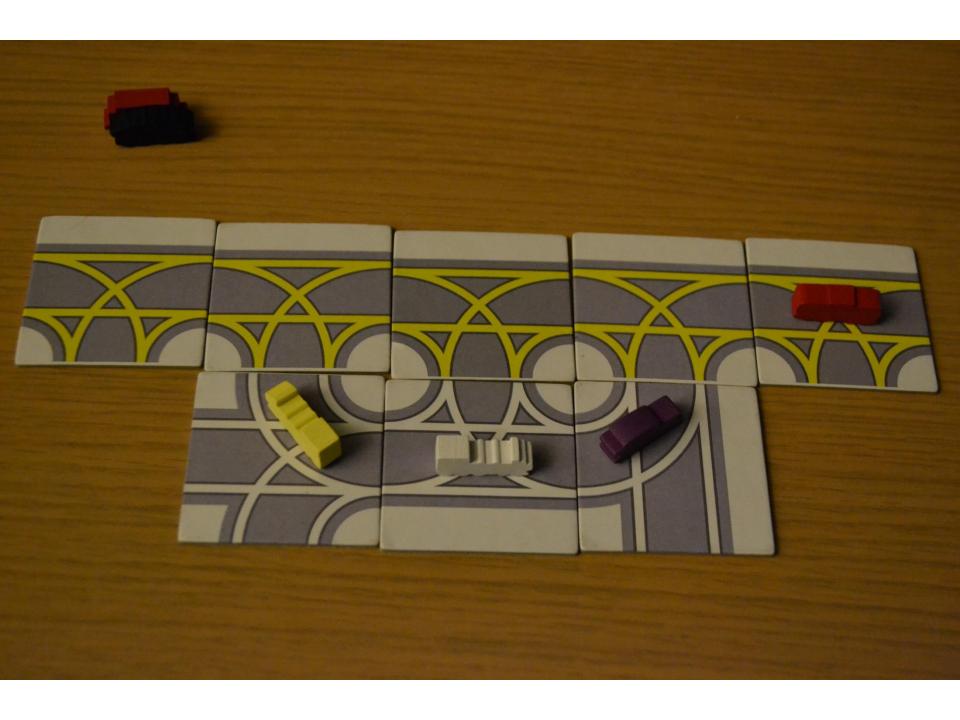


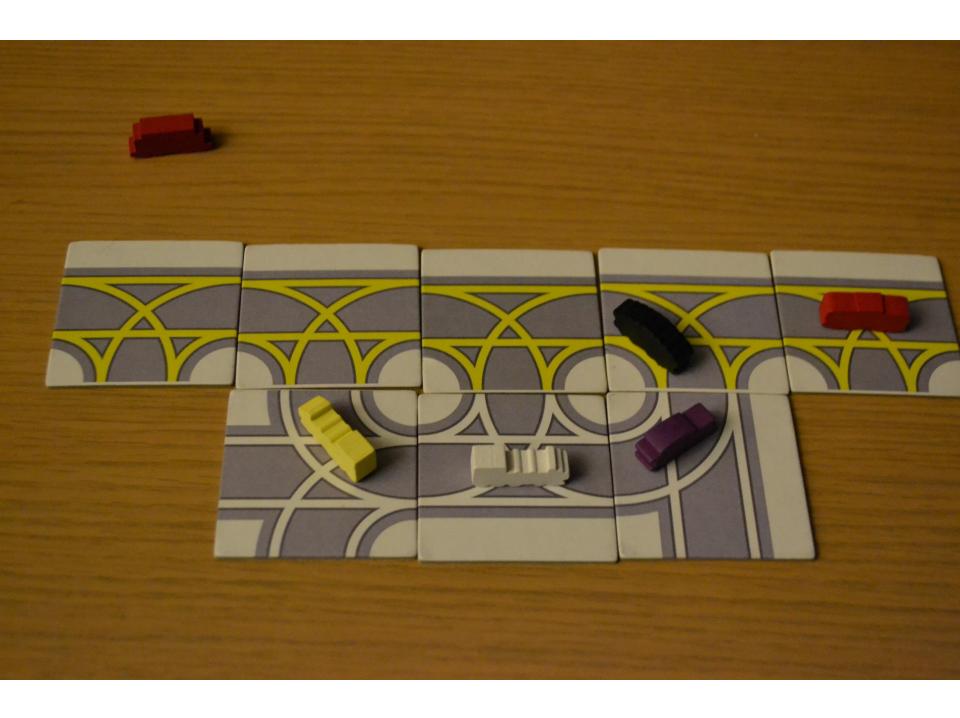


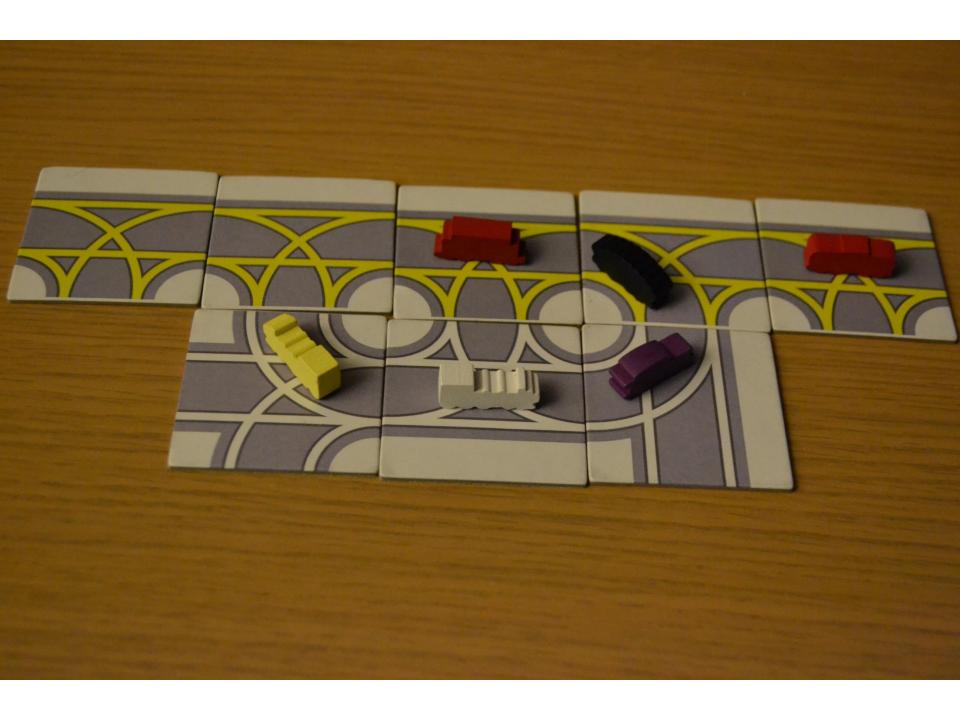


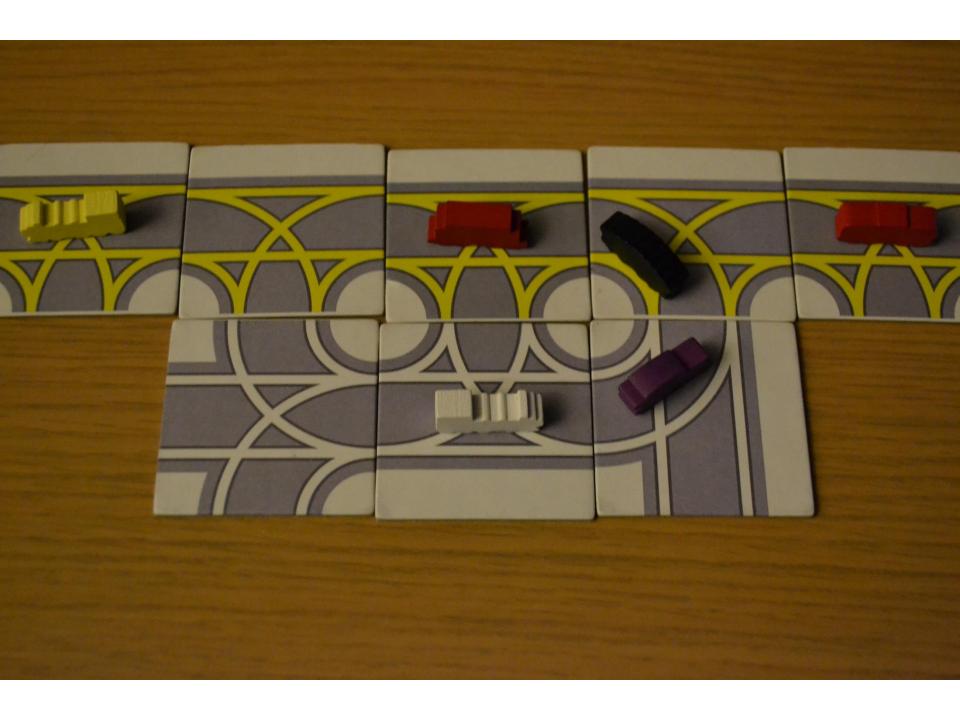


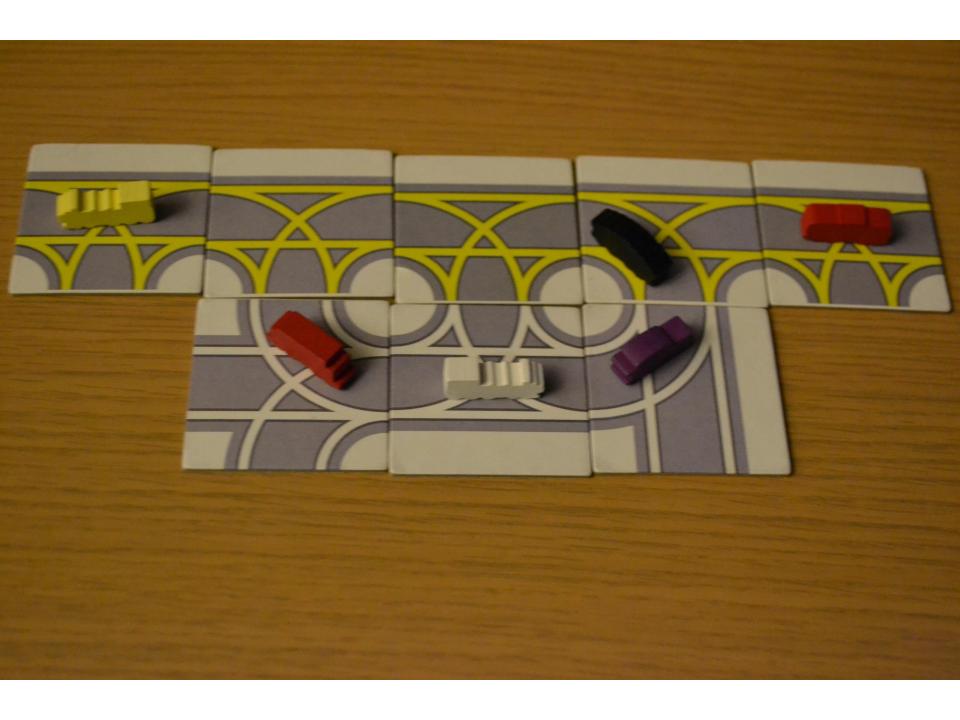


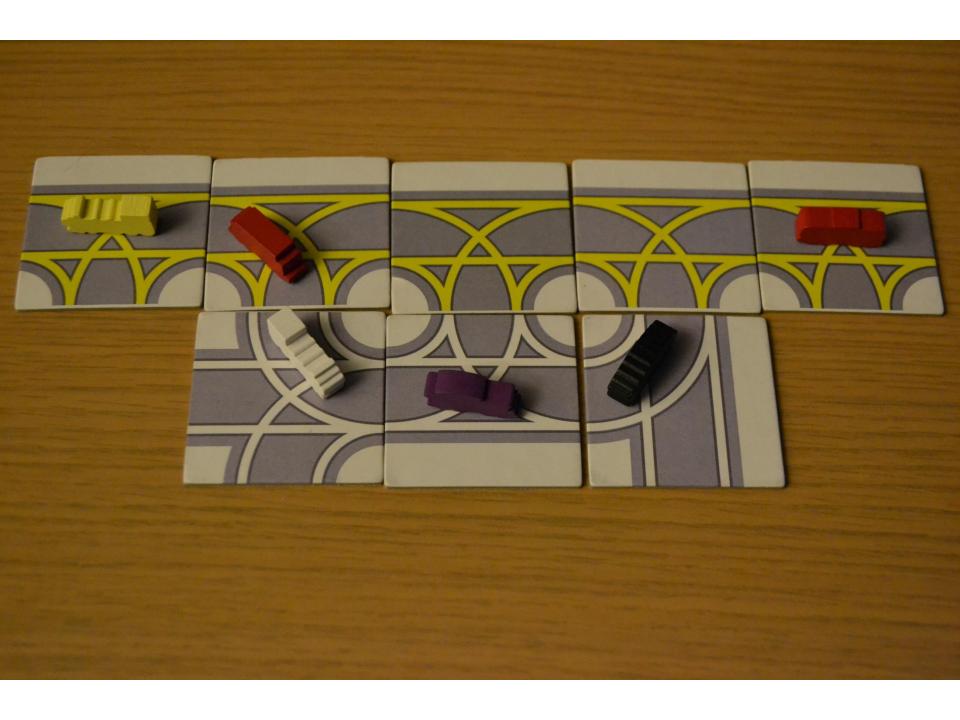




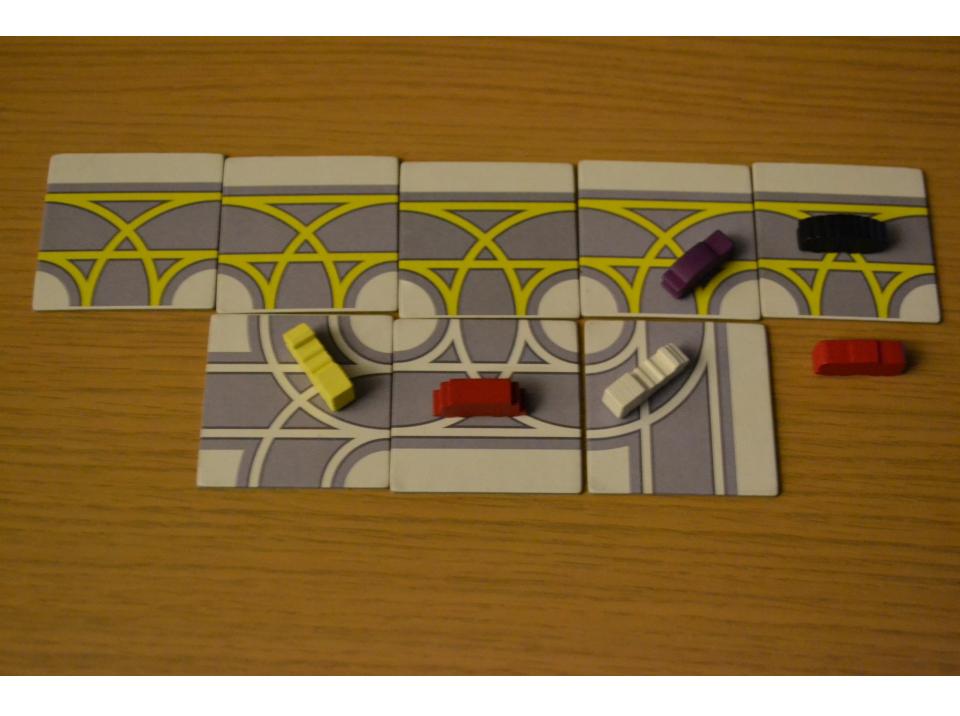


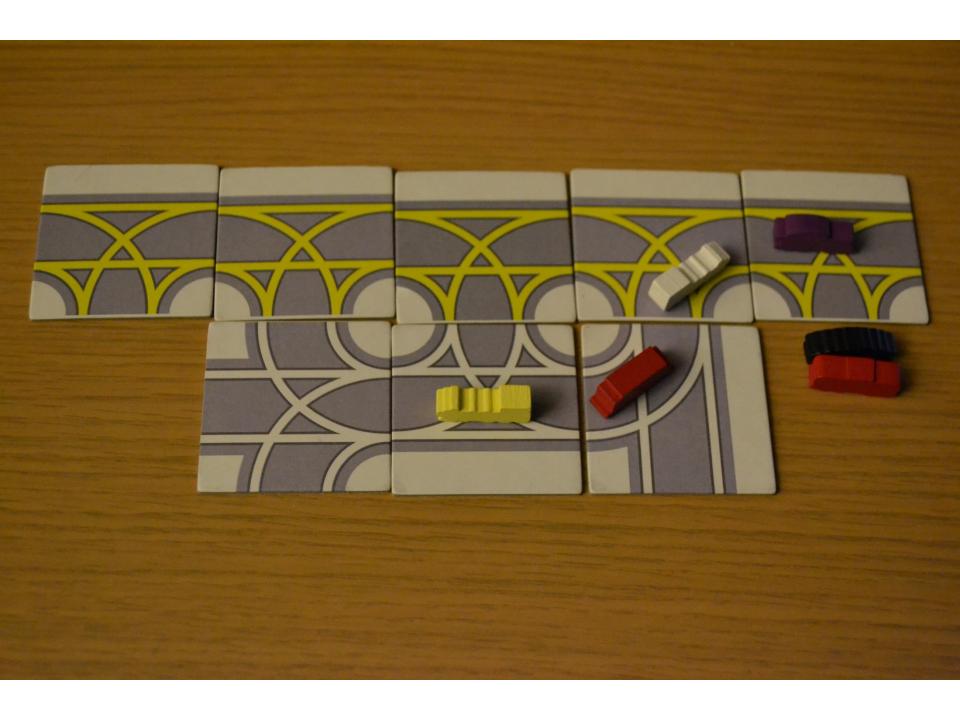


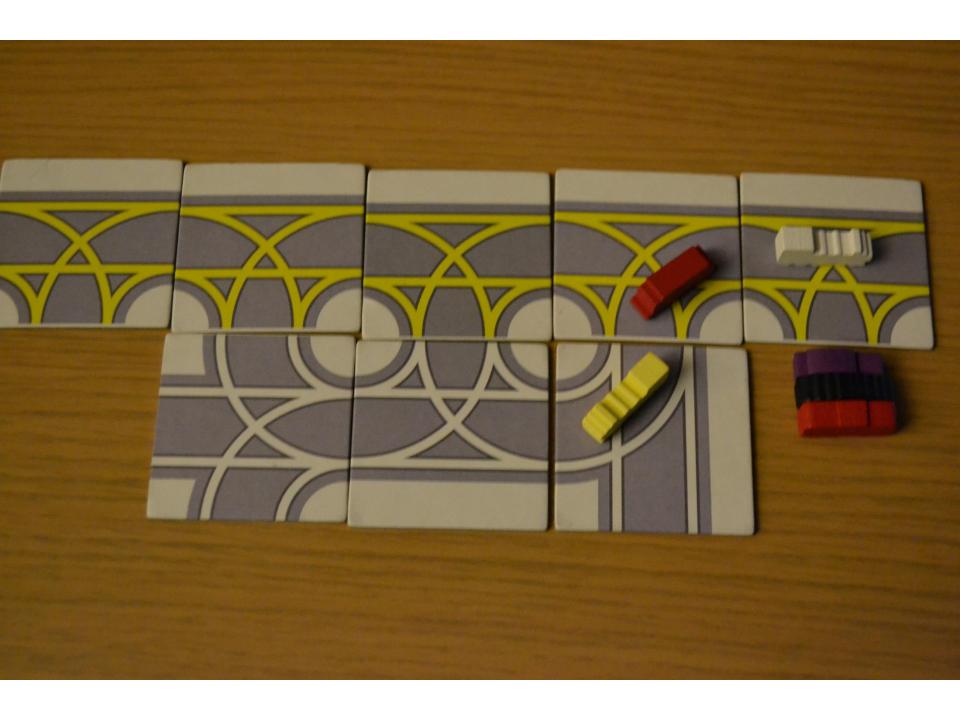


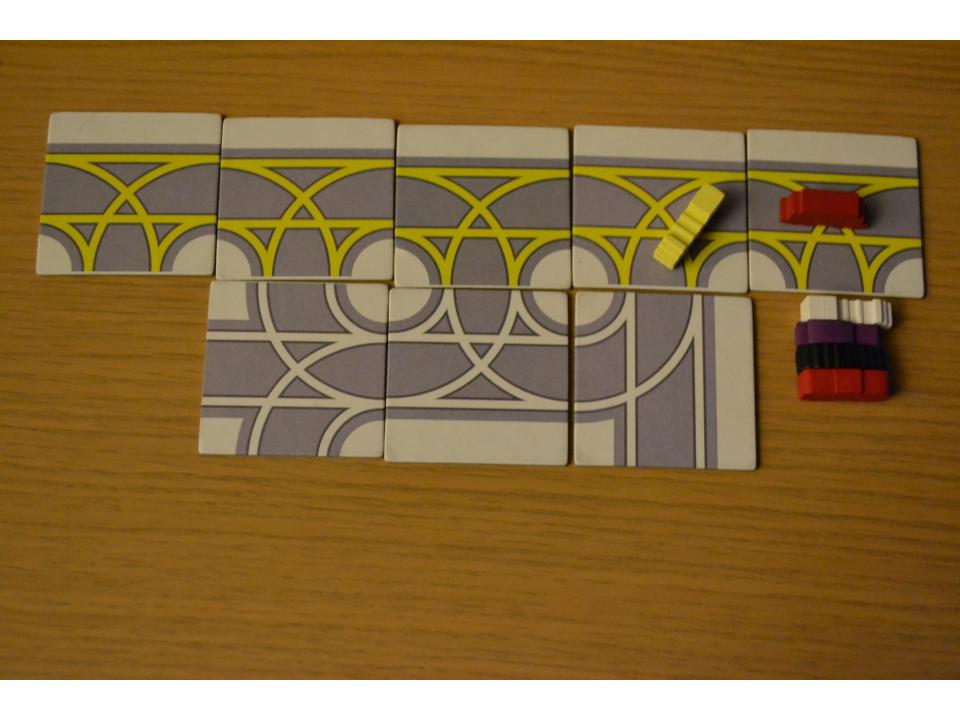




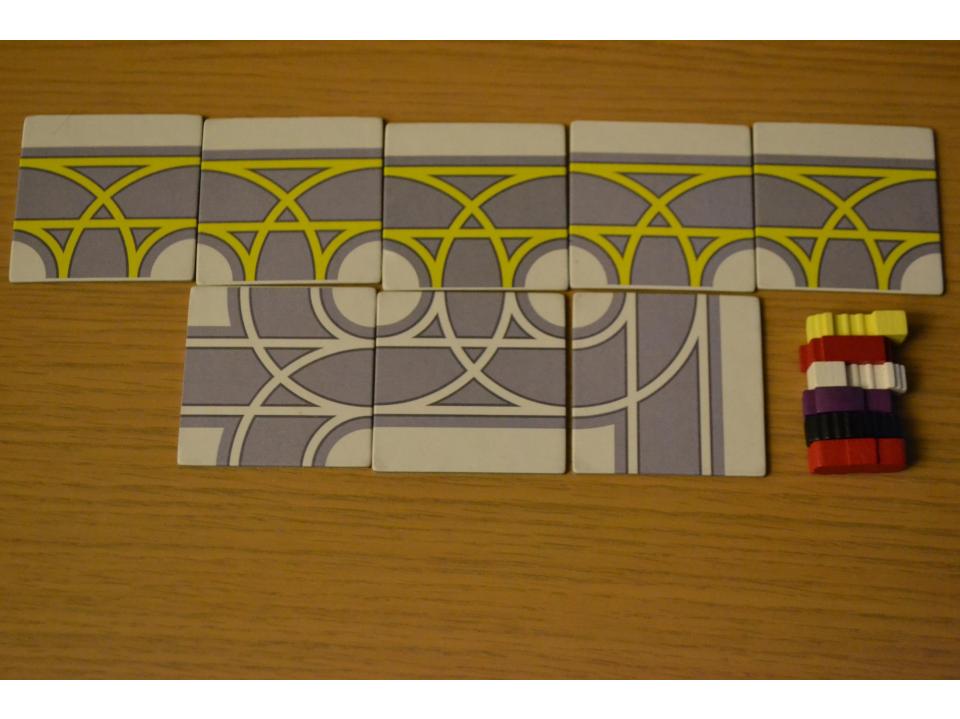












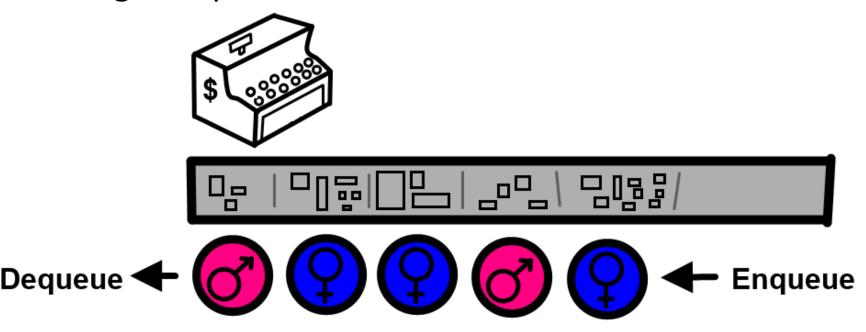
#### Stack of Benefits

- Algorithm design / programming game play.
- Components useful for education.
- Engaging enough for non computer science enthusiasts.
- Data Structure Evangelism.



#### Queue of Future Work

- Strategy design / Algorithm guide.
- Outreach event.
- More Game Design (It takes time!)
- Using Hump Yard for Education.



#### Please share your train of thought now!

