**Datasets Used**

ActionsNetworks.csv: round-level data of a particular network.

* **maxBeige:** The maximum number of individuals who have selected ‘Beige’ in this round. Beige is only an option in rounds 8 and 16.
* **maxBlack:** The maximum number of individuals who have selected ‘Black’ in this round. Black is only available in rounds 4, 8, 12 and 16.
* **maxBlue:** The maximum number of individuals who have selected ‘Blue’ in this round. Blue is only available in rounds 1, 5, 9, 13 and 17.
* **maxBrown:** The maximum number of individuals who have selected ‘Brown’ in this round. Brown is only available in rounds 9 and 17.
* **maxCyan:** The maximum number of individuals who have selected ‘Cyan’ in this round. Cyan is only available in rounds 6 and 14.
* **maxGreen:** The maximum number of individuals who have selected ‘Green’ in this round. Green is only available in rounds 2,6,10 and 14.
* **maxMagenta:** The maximum number of individuals who have selected ‘Magenta’ in this round. Magenta is only available in rounds 4, 8, 12 and 16.
* **maxOlive:** The maximum number of individuals who have selected ‘Olive’ in this round. Olive is only an option in rounds 8 and 16.
* **maxOrange:** The maximum number of individuals who have selected ‘Orange’ in this round. Orange is only available in rounds 2,6,10 and 14.
* **maxPink:** The maximum number of individuals who have selected ‘Pink’ in this round. Pink is only available in rounds 6 and 14.
* **maxPurple:** The maximum number of individuals who have selected ‘Purple’ in this round. Purple is only available in rounds 3,7,11 and 15.
* **maxRed:** The maximum number of individuals who have selected ‘Red’ in this round. Red is only available in rounds 1, 5, 9, 13 and 17.
* **maxSilver:** The maximum number of individuals who have selected ‘Silver’ in this round. Silver is only available in rounds 7 and 15.
* **maxTeal:** The maximum number of individuals who have selected ‘Teal’ in this round. Teal is only available in rounds 7 and 15.
* **maxYellow:** The maximum number of individuals who have selected ‘Yellow’ in this round. Yellow is only available in rounds 3,7,11 and 15.
* **RoundCode:** The round number the data is drawn from. Round 1 is a practice round and disregarded in analysis.
* **SessionCode:** The session the data is drawn from. Each network is run in its own session, meaning this functionality differentiates networks from each other. We run multiple sessions per class.
* **Time1move:** The time the individual with id\_in\_session == 1 makes their first move in the network. Id\_in\_session does not vary with rounds.
* **Time2move:** The time the individual with id\_in\_session == 2 makes their first move in the network. Id\_in\_session does not vary with rounds.
* **Time3move:** The time the individual with id\_in\_session == 3 makes their first move in the network. Id\_in\_session does not vary with rounds.
* **Time4move:** The time the individual with id\_in\_session == 4 makes their first move in the network. Id\_in\_session does not vary with rounds.
* **Time5move:** The time the individual with id\_in\_session == 5 makes their first move in the network. Id\_in\_session does not vary with rounds.
* **Time6move:** The time the individual with id\_in\_session == 6 makes their first move in the network. Id\_in\_session does not vary with rounds.
* **totalClicks:** The amount of times a color was selected by the networks in a given round, including options that did not switch colors (selecting red when red is already a player’s chosen color; it has no visible effect on other networks)

AverageActionsIndiv.csv: Average actions of individuals through rounds 2-17.

* **ExtraClicks:** The average amount of times an individual made a choice that did not switch their current color (selecting red when red is already their active choice; it has no visible effect on other’s screens).
* **FLchoice:** The proportion of rounds where an individual’s first choice was the same as their last choice (including if there was no change in action).
* **FirstFinal:** The proportion of rounds where an individual made only 1 choice.
* **Ftime:** The average amount of time remaining when an individual made their first choice.
* **Ftimems:** The average amount of time in milliseconds that had passed in the overall network when an individual made their first choice.
* **Ftimems2:** The average amount of time in milliseconds that had passed in the overall network when an individual made their first choice, subtracting the time it took for the network to pop up on the individual’s page (TimeRequest).
* **id\_in\_group:** The individual’s average id\_in\_group across the 16 rounds. This value changes randomly each round, determines one’s position in the network, and can take discrete values from [1,6] each round. Should average of 3.5 on average.
* **Ltime:** The average amount of time remaining when an individual made their last choice.
* **Ltimems:** The average amount of time in milliseconds that had passed in the overall network when an individual made their last choice
* **Ltimems2:** The average amount of time in milliseconds that had passed in the overall network when an individual made their first choice, subtracting the time it took for the network to pop up on the individual’s page (TimeRequest).
* **NumberChoices:** The average amount of times an individual made a choice that changed their current selected color.
* **NumberClicks:** The average amount of times an individual made a choice regardless of whether it switched their current color or not.
* **ParticipantID:** A unique string for each individual in a network.
* **Rank:** The average of an individual’s ordinal position of first movement in each round. If an individual is the 5th to make their first move in round 2 and 3rd in round three, their ‘rank’ for those two rounds would be computed as (5+3)/2 = 4. This is the same concept extended for all 16 rounds.
* **SecondFinal:** The proportion of rounds where an individual made only 2 choices
* **SessionCode:** The session the data is drawn from. Each network is run in its own session, meaning this functionality differentiates networks from each other. We run multiple sessions per class.
* **TimeRequest:** The average amount of time an individual’s tablet takes to access the network once the page is initiated. In milliseconds.

ActionsIndiv.csv: Actions of individuals in each round

* **ExtraClicks:** The amount of times an individual made a choice that did not switch their current color (selecting red when red is already their active choice; it has no visible effect on other’s screens).
* **Fchoice:** The color selected as their first choice in a round.
* **FLchoice:** A binary variable indicating if an individual’s first choice was the same color as their last choice. If an individual makes only 1 choice, by necessity this equals 1.
* **Ftime:** The time remaining when an individual made their first choice; in discrete increments and meant to represent the value of the timer seen on the screen when the choice was made.
* **Ftimems:** The amount of time in milliseconds that had passed in the overall network when an individual made their first choice.
* **Ftimems2:** The amount of time in milliseconds that had passed in the overall network when an individual made their first choice, subtracting the time it took for the network to pop up on the individual’s page (TimeRequest).
* **id\_in\_group:** The individual’s unique id\_in\_group for a given round. This value changes randomly each rounds and is determines their position in the network.
* **Lchoice:** The color an individual last selected in the network.
* **Ltime:** The time remaining when an individual made their last choice; in discrete increments and meant to represent the value of the timer seen on the screen when the choice was made.
* **Ltimems:** The amount of time in milliseconds that had passed in the overall network when an individual made their last choice.
* **Ltimems2:** The amount of time in milliseconds that had passed in the overall network when an individual made their first choice, subtracting the time it took for the network to pop up on the individual’s page (TimeRequest).
* **NumberChoices:** The amount of times an individual made a choice that switched their current selected color.
* **NumberClicks:** The amount of times an individual made a choice regardless of whether it switched their current color or not.
* **ParticipantID:** A unique string for each individual in a network.
* **Rank:** The ordinal rank of an individual’s first movement in a network. Moving first would give a rank of 1, moving second would give a rank of 2 etc.
* **RoundCode:** The round number from which the data is drawn.
* **SessionCode:** The session the data is drawn from. Each network is run in its own session, meaning this functionality differentiates networks from each other. We run multiple sessions per class.
* **TimeRequest:** The amount of time an individual’s tablet takes to access the network once the page is initiated. In milliseconds.

dataNetworks.csv: Network Analysis by round

* **Color1Count:** The amount of individuals selecting the ‘first’ color option in a round when the network either concluded or converged.
* **Color2Count:** The amount of individuals selecting the ‘second’ color option in a round when the network either concluded or converged.
* **Color3Count:** The amount of individuals selecting the ‘third’ color option in a round when the network either concluded or converged. Is 0 in rounds where individuals are only given two color choices (rounds 1-5, 10-13).
* **Color4Count:** The amount of individuals selecting the ‘fourth’ color option in a round when the network either concluded or converged. Is 0 in rounds where individuals are only given two color choices (rounds 1-5, 10-13).
* **Convergence:** ‘yes’ if the network converged and ‘no’ otherwise.
* **Grade:** 0 the network was drawn from a class of kindergartener, 1 if from 1st Graders, and 2 if from 2nd Graders.
* **ParticipantID:** Vestigal remains from earlier iteration of file; set to 1 for every ‘network’ and not used in analysis.
* **RoundCode:** The round number from which the data is drawn.
* **RT:** The amount of time it took the network to converge; 0 if the network did not converge.
* **SessionCode:** The session the data is drawn from. Each network is run in its own session, meaning this functionality differentiates networks from each other. We run multiple sessions per class.
* **SizeNetwork**:How large the network was. 6 for every single round/network.
* **toys1:** The amount of toys won in another task.
* **toys2:** The amount of toys won in the task in toys 1 and the toys in a second task.
* **toysnetwork**: the amount of toys won in the network task.

dataNetworksIndiv.csv – individual level analysis drawn from network files

* **Action:** The individual’s ending color
* **ActionType:** Vestigial variable not used in analysis.
* **BirthDay:** The date of birth of the individual with the corresponding SessionCode and ParticipantID.
* **BirthMonth:** The month of birth of the individual with the corresponding SessionCode and ParticipantID.
* **BirthYear:** The year of birth of the individual with the corresponding SessionCode and ParticipantID.
* **Convergence:** Whether the individual’s network converged. Identical values in rows where the RoundCode and the SessionID’s are identical.
* **Gender:** The gender of the individual with the corresponding SessionCode and ParticipantID.
* **Grade:** The grade of the individual with the corresponding SessionCode and ParticipantID.
* **id\_in\_session:** Taking values [1,6], individuals are marked with this value that is invariant between rounds and consistent through the entire experiment.
* **NumberConnections:** The number of other individuals in the network visible to the player. 2 for rounds 4,5,8,9,10,11,14,15/
* **ParticipantID:** A unique string for each individual in a network.
* **RoundCode:** The round number from which the data is drawn.
* **SessionCode:** The session the data is drawn from. Each network is run in its own session, meaning this functionality differentiates networks from each other. We run multiple sessions per class.
* **SizeNetwork:** How large the network was. 6 for every single round/network.
* **Time1:** The amount of time the individual spent on Color 1 for this round.
* **Time2:** The amount of time the individual spent on Color 2 for this round.
* **Time3:** The amount of time the individual spent on Color 2 for this round.
* **Time4:** The amount of time the individual spent on Color 2 for this round.

NetworksChoices.csv: network level data

* **ExtraClicks:** The amount of times individuals in the network made a choice that did not switch their current selected color.
* **NumberChoices:** The amount of times individuals in the network made a choice that switched their current selected color.
* **RoundCode:** The round number from which the data is drawn.
* **SessionCode:** The session the data is drawn from. Each network is run in its own session, meaning this functionality differentiates networks from each other. We run multiple sessions per class.

Probabilities.csv: Individual level data about the consistency of choices with our algorithm’s ‘p’ variable. Drawn from choices made when an individual’s neighbors have already made selections previously excluding those where an individual makes the same choice repeatedly (i.e. switching from red to red)

* **2Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 2.
* **2Total\_NumberOpp:** the amount of decisions made in round 2.
* **3Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 3.
* **3Total\_NumberOpp:** the amount of decisions made in round 3.
* **4Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 4.
* **4Total\_NumberOpp:** the amount of decisions made in round 4.
* **5Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 5.
* **5Total\_NumberOpp:** the amount of decisions made in round 5.
* **6Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 6.
* **6Total\_NumberOpp:** the amount of decisions made in round 6.
* **7Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 7.
* **7Total\_NumberOpp:** the amount of decisions made in round 7.
* **8Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 8.
* **8Total\_NumberOpp:** the amount of decisions made in round 8.
* **9Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 9.
* **9Total\_NumberOpp:** the amount of decisions made in round 9.
* **10Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 10.
* **10Total\_NumberOpp:** the amount of decisions made in round 10.
* **11Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 11.
* **11Total\_NumberOpp:** the amount of decisions made in round 11.
* **12Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 12.
* **12Total\_NumberOpp:** the amount of decisions made in round 12.
* **13Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 13.
* **13Total\_NumberOpp:** the amount of decisions made in round 13.
* **14Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 14.
* **14Total\_NumberOpp:** the amount of decisions made in round 14.
* **15Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 15.
* **15Total\_NumberOpp:** the amount of decisions made in round 15.
* **16Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 16.
* **16Total\_NumberOpp:** the amount of decisions made in round 16.
* **17Total\_CorrectDec:** the amount of decisions made that were consistent with the algorithm in round 17.
* **17Total\_NumberOpp:** the amount of decisions made in round 17.
* **C2N2:** The proportion of choices consistent with the algorithm in rounds with 2 color options and 2 neighbors.
* **C2N3:** The proportion of choices consistent with the algorithm in rounds with 2 color options and 3 neighbors.
* **C4N2:** The proportion of choices consistent with the algorithm in rounds with 4 color options and 3 neighbors.
* **C4N3:** The proportion of choices consistent with the algorithm in rounds with 4 color options and 3 neighbors.
* **ParticipantID:** A unique string for each individual in a network.
* **Probability:** total\_CorrectDec/total\_NumberOpp
* **Probability\_2Colors:** total\_CorrectDec\_2Colors/ total\_NumberOpp\_2Colors
* **Probability\_2N:** total\_CorrectDec\_2N /total\_NumberOpp\_2N
* **Probability\_3N:** total\_CorrectDec\_3N /total\_NumberOpp\_3N
* **Probability\_4Colors:** total\_CorrectDec\_4Colors/ total\_NumberOpp\_4Colors
* **Probability2**: Another measurement of probability ultimately not used where P is calculated for each round then averaged across the 16 rounds. In essence, a version of probability unweighted by number of choices per round.
* **SessionCode:** The session the data is drawn from. Each network is run in its own session, meaning this functionality differentiates networks from each other. We run multiple sessions per class.
* **total\_CorrectDec:** The amount of decisions consistent with the algorithm across rounds 2-17
* **total\_CorrectDec\_2Colors:** The amount of decisions consistent with the algorithm across rounds with 2 color options.
* **total\_CorrectDec\_2N:** The amount of decisions consistent with the algorithm across rounds where individuals see 2 other individual’s choices.
* **total\_CorrectDec\_3N:** The amount of decisions consistent with the algorithm across rounds where individuals see 3 other individual’s choices.
* **total\_CorrectDec\_4Colors:** The amount of decisions consistent with the algorithm across rounds with 4 color options.
* **total\_CorrectDec C2N2:** The amount of decisions consistent with the algorithm across rounds where individuals see 2 other individuals’ choices and have 2 color options.
* **total\_CorrectDec\_C2N3:** The amount of decisions consistent with the algorithm across rounds where individuals see 3 other individuals’ choices and have 2 color options.
* **total\_CorrectDec\_C4N2:** The amount of decisions consistent with the algorithm across rounds where individuals see 2 other individuals’ choices and have 4 color options.
* **total\_CorrectDec\_C4N3:** The amount of decisions consistent with the algorithm across rounds where individuals see 3 other individuals’ choices and have 4 color options.
* **total\_NumberOpp:** The amount of decisions made across rounds 2-17.
* **total\_NumberOpp\_2Colors:** The amount of decisions made across rounds with 2 color options.
* **total\_NumberOpp\_2N:** The amount of decisions made across rounds where individuals see 2 other individual’s choices.
* **total\_NumberOpp\_3N:** The amount of decisions made across rounds where individuals see 3 other individual’s choices.
* **total\_NumberOpp\_4Colors:** The amount of decisions made across rounds with 4 color options.
* **total\_NumberOpp\_C2N2:** The amount of decisions made across rounds where individuals see 2 other individuals’ choices and have 2 color options.
* **total\_NumberOpp\_C2N3:** The amount of decisions made across rounds where individuals see 3 other individuals’ choices and have 2 color options.
* **total\_NumberOpp\_C4N2:** The amount of decisions made across rounds where individuals see 2 other individuals’ choices and have 4 color options.
* **total\_NumberOpp\_C4N3: :** The amount of decisions made across rounds where individuals see 3 other individuals’ choices and have 4 color options.