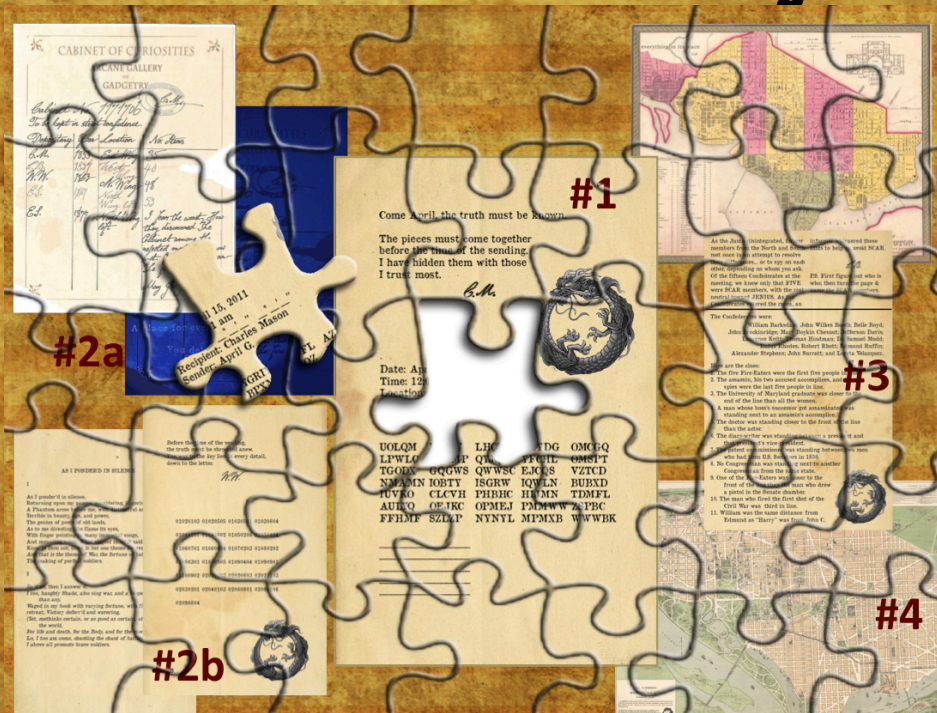


Designing Collaborative Learning Into Alternate Reality Games



Bonsignore, Hansen, Kraus, Ahn, Visconti, Fraistat, & Druin



**@ebonsign, @shakmatt, @karikraus, @ahnjune, @adruin,
@Literature_Geek**





**Georgina Goodlander,
Program Director, Smithsonian American Art Museum**





CABINET OF CURIOSITIES



ARCANE GALLERY OF GADGETRY



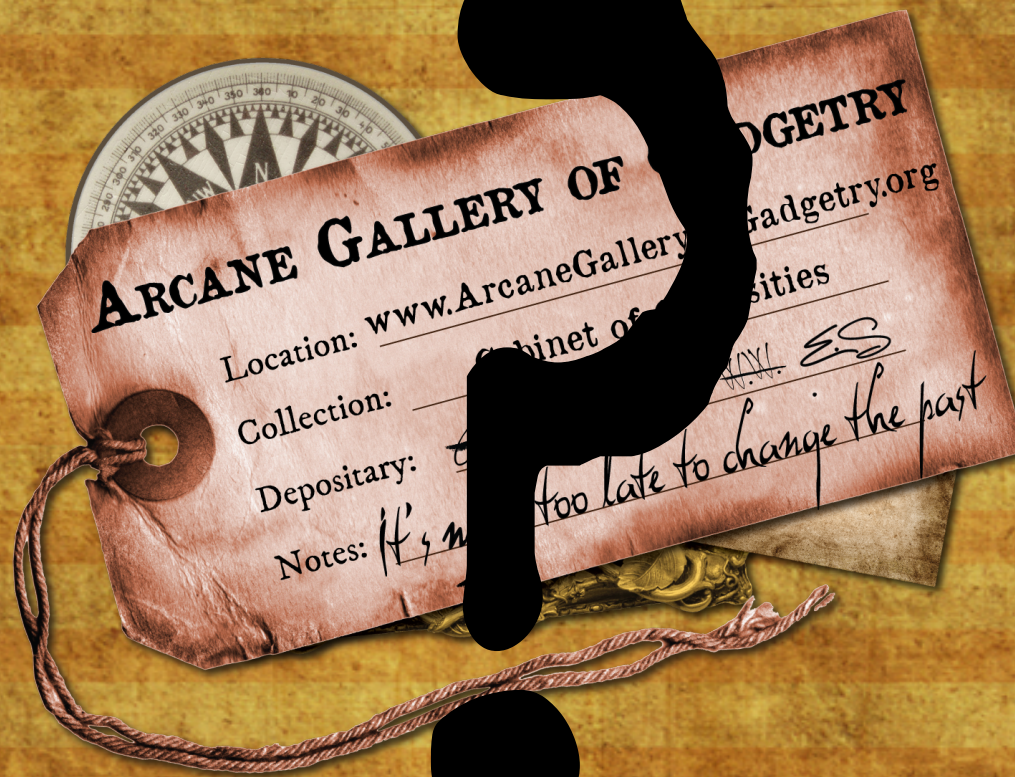
Cabinet No. 1171706
To be kept in strict confidence.

<i>Depositary</i>	<i>Year</i>	<i>Location</i>	<i>No. Items</i>
<i>C.M.</i>	<i>1853</i>	<i>East Wing</i>	<i>35</i>
<i>E.B.</i>	<i>1854</i>	<i>West</i>	<i>40</i>
<i>W.W.</i>	<i>1863</i>	<i>Wing</i>	<i>48</i>
<i>E.S.</i>	<i>1867</i>	<i>N. Wing</i>	<i>53</i>
<i>E.S.</i>	<i>1877</i>	<i>North Wing</i>	<i>I fear the worst. How they discovered the Cabinet among the rejected models I know not. One thing is clear - The fire was no accident.</i>
		<i>loft</i>	

May God protect us all.



Alternate Reality Game

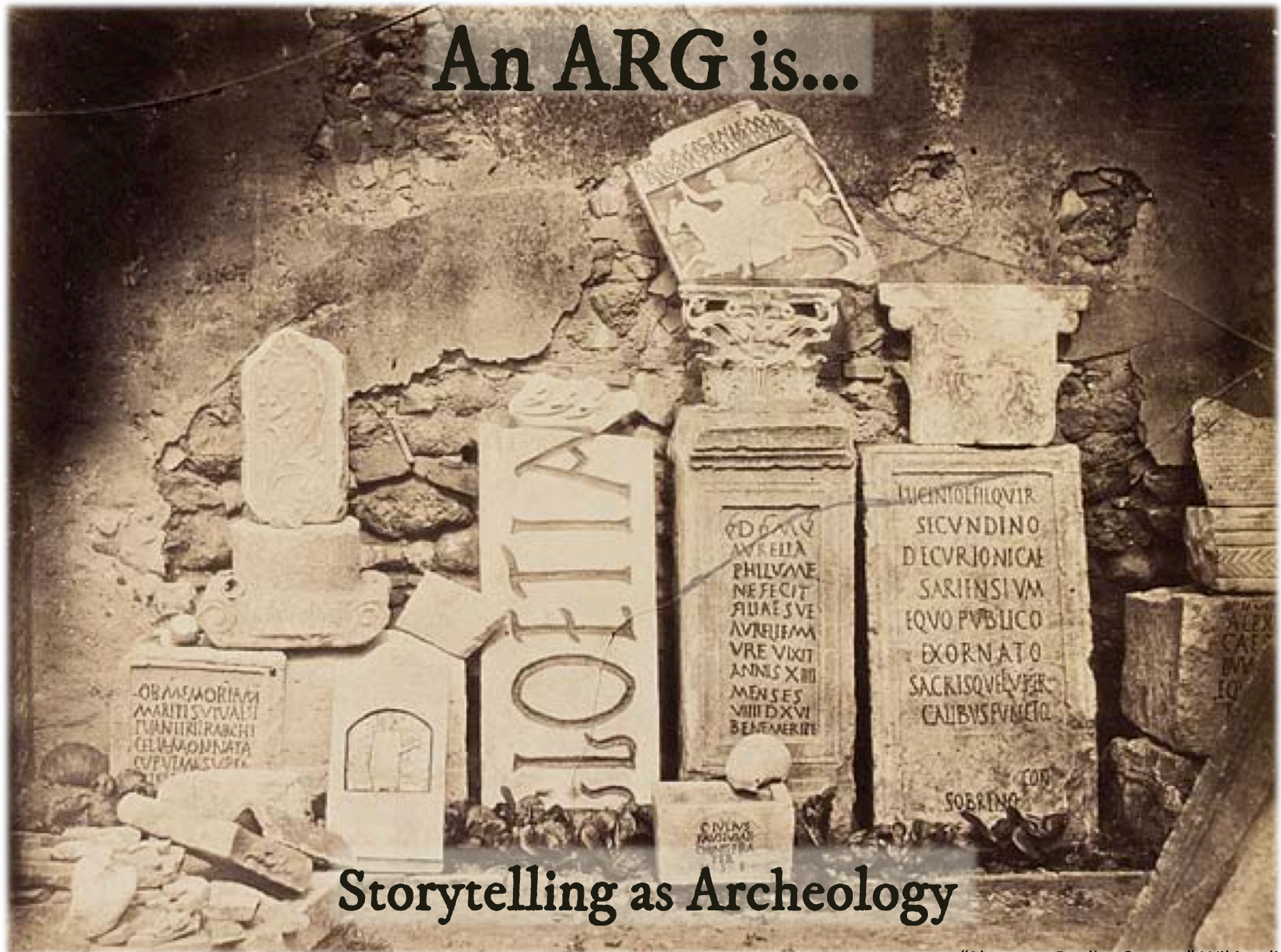


Collaborative Sense-making
(prizes available)



NOT Video Games

An ARG is...



Storytelling as Archeology

"Alternate Reality Games." Wikipedia.

An ARG is...

Pervasive Game



An ARG is...

Collaborative Sensemaking



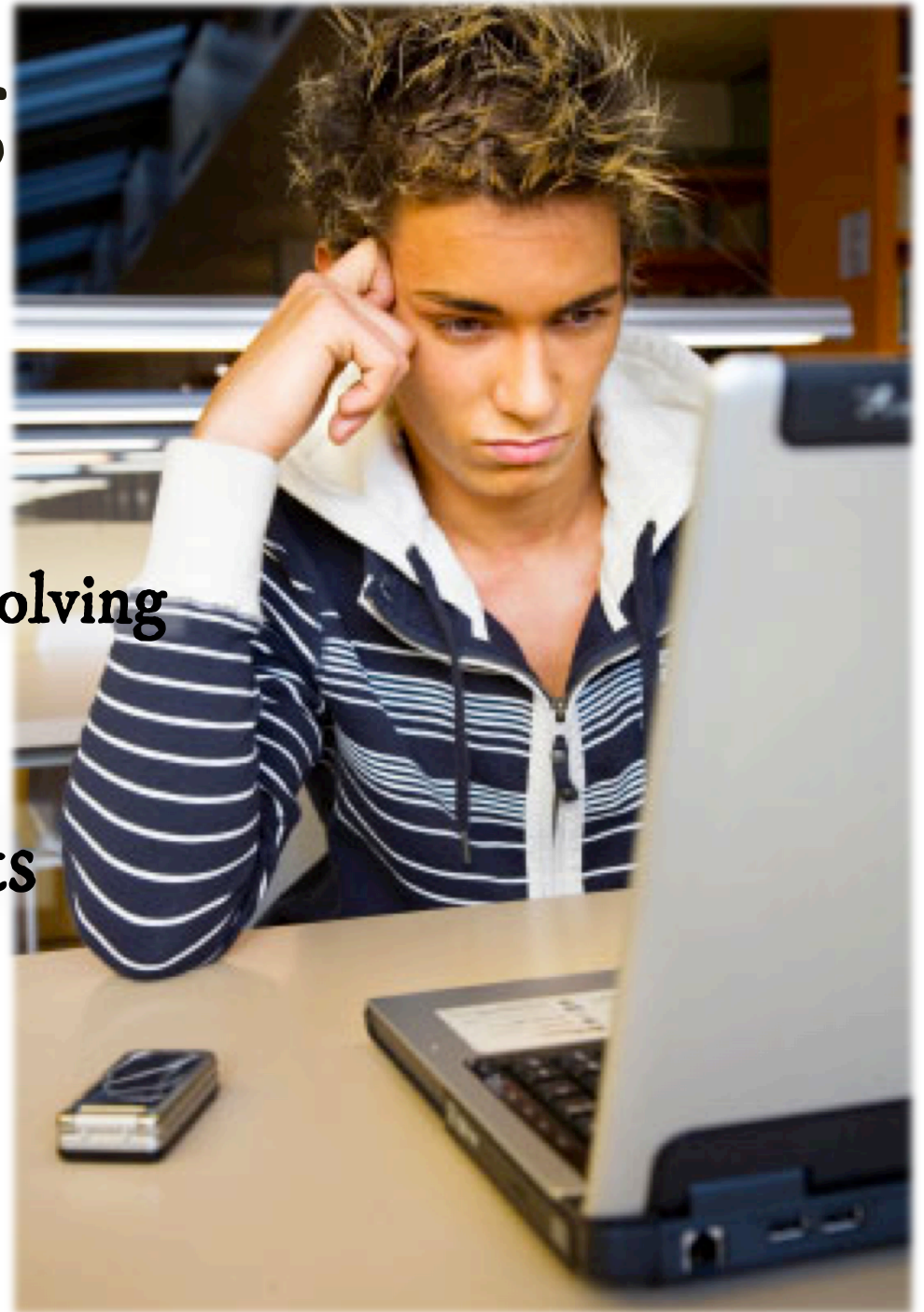
ARGs & learning

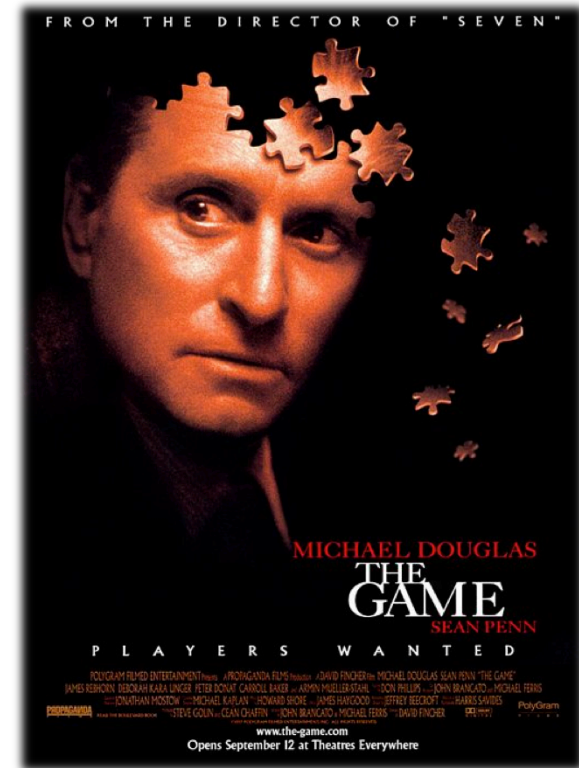
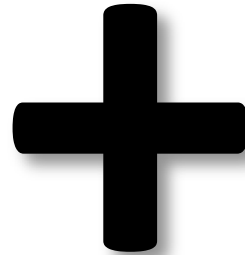
Practice literacy skills

- Information Evaluation
- Collaborative Problem-solving
- Critical Thinking

Authentic environments

- Controls = everyday communication tools





How to design ARG narrative and puzzles to promote collaborative learning?

A group of five people (three men and two women) are smiling and posing for a photo outdoors. They are gathered under a large purple umbrella. The man in the back center is holding the umbrella. The woman on the far right is wearing a blue hoodie and a black beanie with a white city skyline design. The woman on the far left is wearing a blue jacket and glasses. The woman in the front center has red hair and is wearing a white shirt. The man in the middle is wearing a plaid shirt. The background shows a wooden pergola and green trees.

Collaborative Learning

Cooperative Learning

**Positive
Interdependence**

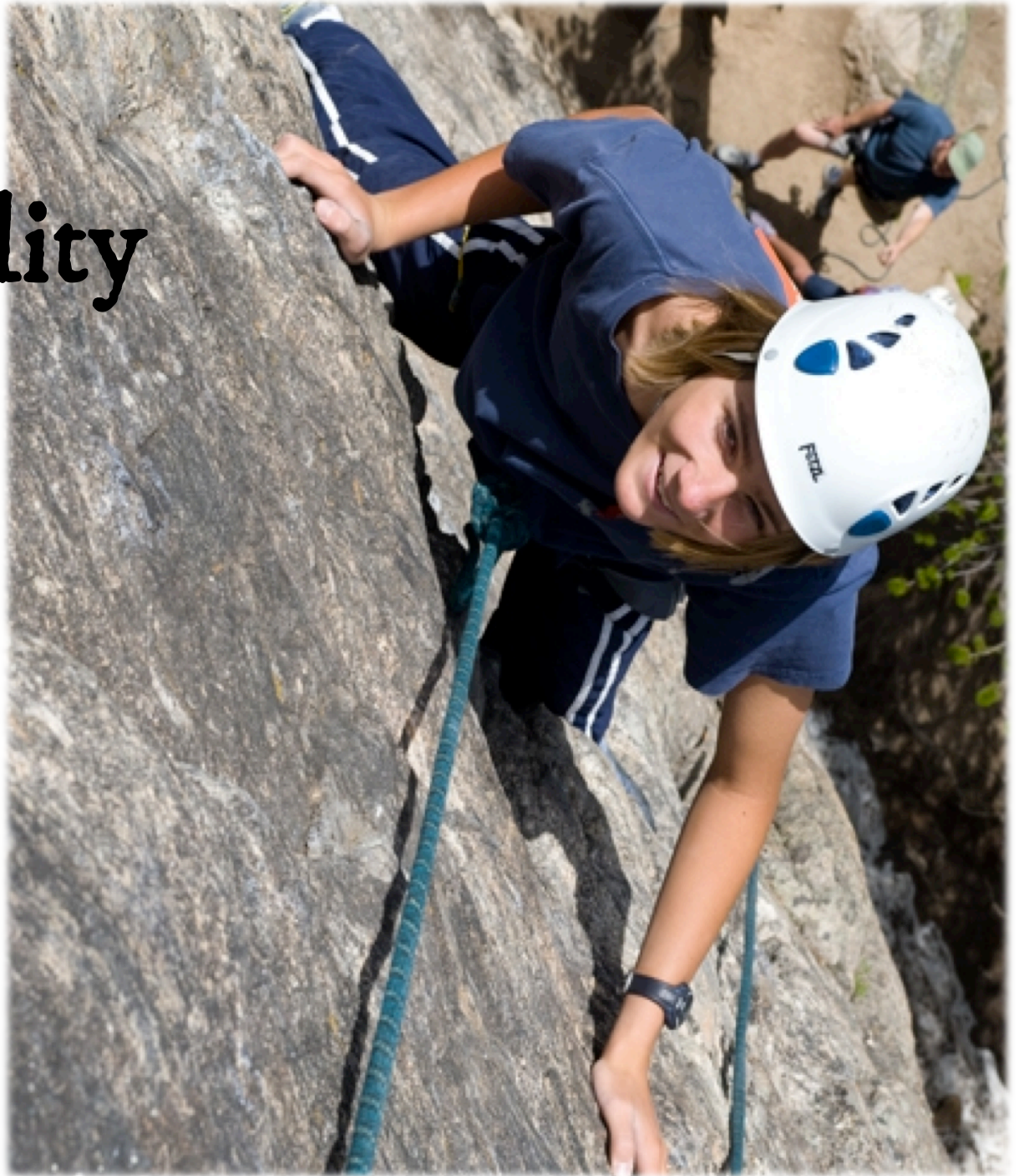
**Promotive
Interaction**

**Individual
Accountability**

**Group
Processing**

Individual Accountability

Each student is responsible for individual tasks within the group.



Positive Interdependence



Each student's success
contributes to group success.



Students encourage each other
with positive, constructive feedback.



Groups take time to reflect on their performance together and to work through controversies constructively.

Arcane Gallery of Gadgetry (AGOG)

Come April, the truth must be known.

The pieces must come together
before the time of the sending.
I have hidden them with those
I trust most.

C.M.



Date: April 15, 2011

Time: 12:01 am

Location: " " " " "

Recipient: Charles Mason

Sender: April G.

Q	M	Y	G	R	I	Y	L	H	C	F	L	A	Z	Y	D	G	O	M	C	G	Q	
T	L	C	B	P	X	M	P	Q	J	Q	Z	Y	F	C	H	L	O	M	S	P	T	
D	X	G	Q	G	W	S	Q	W	W	S	C	E	J	C	Q	S	V	Z	T	C	D	
A	M	N	I	O	B	T	Y	I	S	G	R	W	I	Q	W	L	N	B	U	B	X	D
R	O	C	L	C	V	H	P	H	B	H	C	H	I	J	M	N	T	D	M	F	L	
Y	Q	O	E	J	K	C	O	P	M	E	J	P	M	M	W	W	Z	S	P	B	C	
L	M	F	S	Z	L	Z	P	N	Y	N	Y	L	M	P	M	X	B	W	W	W	B	K



The Players

~60 students

(26 boys, 34 girls)

13-14 years old

8th grade Social Studies

50% “FARM” students

6% LEP students



Content Learning Design Goal

*"We take history for granted
because we encounter it
in a format that makes it
seem inevitable.
We forget that it could have
gone any way at any moment."*



playthepast



- Develop strategies to **interpret** & **evaluate** texts.
- **Differentiate** between facts & interpretations.
- **Challenge** arguments of historical **inevitability**.
- Study **relationships** among science, technology & society.

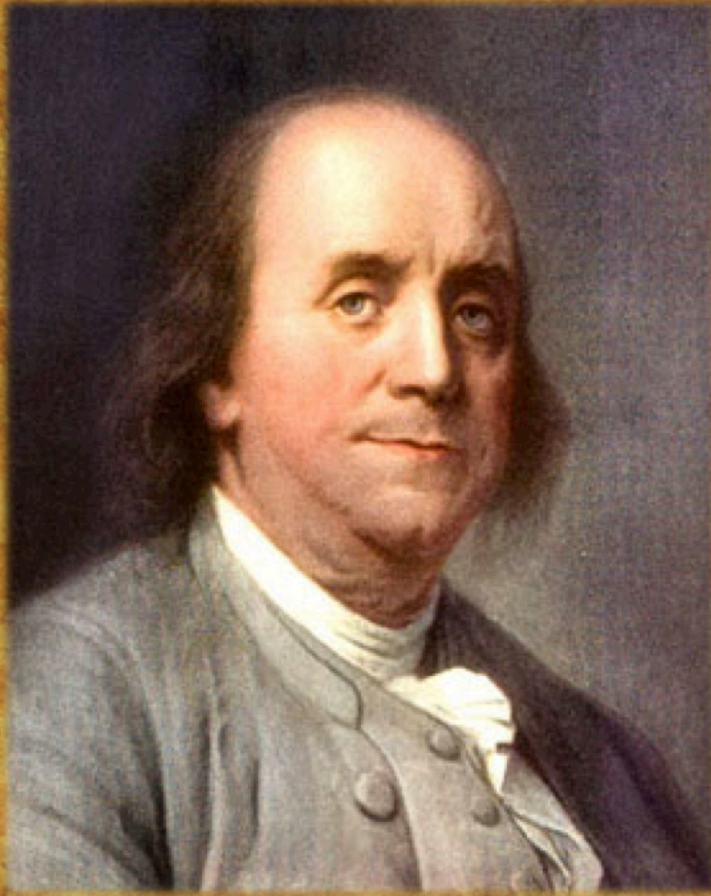
Collaborative Learning Design Goal

*Apply principles of
Cooperative
Learning*

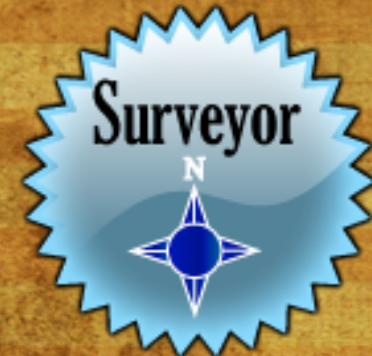
Distribute challenges
so that each student
is an integral component
of the group's success
in uncovering the story.



Positive Interdependence



Junto => Jenius



Individual Accountability



SURVEYOR MISSION #1



ARCHIVIST MISSION #3

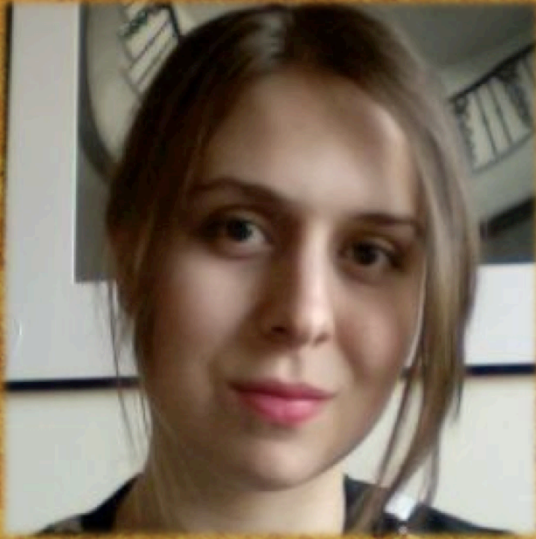


SURVEYOR MISSION #2



CRYPTOGRAPHER MISSION #3

Promotive Interaction



- In-game characters model positive feedback

JENIUS WALL

TimV. I Got A BADGE! (:

[Edit](#) [Delete](#) [View conversation](#)

Ben05 just gd with mission 1. man thats hard. i felt like a fail

[Edit](#) [Delete](#) [View conversation](#)

Ben05 but feel like a boy scout when i get a badge. so proud of myself.

[Edit](#) [Delete](#) [View conversation](#)

Tina05 >> **April G.** HEY APRIL :) I finished my second mission ;)

[Edit](#) [Delete](#) [View conversation](#)

- Social media channels to share successes and requests for help

Group Processing

- Daily check-ins
- Meeting at midpoint
- Final debrief and survey



CABINET OF CURIOSITIES
ARCANE GALLERY
OF
GADGETRY

Depository	Year	Location	No. Items
C.M.	1853	East Wing	35
E.B.	1834	West	40
N.W.	1853	Wing	
		M. Wing	48
E.L.	1869	North	
		Wing East	53
E.L.	1874	North Wing	
		East	

I fear the worst. How they discovered the Cabinet among the rejected models. I know not. One thing is clear - The fire was no accident.
May God protect us all

#2a

Before the time of the sending,
the truth must be shrouded anew.
The way to the key lies in every detail,
down to the letter.

R.W.

01020103 01020505 01030501 01030804
01040107 01040602 01050206 01050404
01060701 01060804 01070203 01080202
01080301 01080505 01090404 01090901
01100902 02020303 02020603 02021103
02030201 02040103 02080801 02090606
02090804

#2b



NET OF CURIOSITIES
ARCANE GALLERY
of
GADGETRY

Come April, the truth must be known.

The pieces must come together
before the time of the sending.
I have hidden them with those
I trust most.

B.M.



Date: April 15, 2011
Time: 12:01 am
Location: _____
Recipient: Charles Mason
Sender: April G.

UOLQM	YGR1Y	LHCFL	AZYDG	OMCGQ
LPWLX	BPXMP	QXJQZ	YFCHL	OMSPT
TGODX	GQWGS	QWWSC	EJCSQ	VZTCD
NMAMN	IOBTY	ISGRW	IQWLN	BUBXD
IUVKO	CLCVH	PHEHC	HIJMN	TDMFL
AULYQ	OEJCK	OPMEJ	PMMWV	ZSPBC
FFHMF	SZLZP	NNYNL	MPMXB	WWWBK

THE ALTOGRAPH
OF
WASHINGTON CITY,
ON
COLUMBIAN HILL.



#4a

Junto disintegrated, former
s from the North and South
in an attempt to resolve
ferences... or to spy on each
depending on whom you ask.
fteen Confederates at the
E, we knew only that FIVE
AR members, with the rest
toward JENIUS. As the
rates entered the room, an
informer whispered these
hints to help us avoid SCAR.

E.B.

FS. First figure out who is
who; then turn the page &
name the SCAR members.

Confederates were:

William Barksdale; John Wilkes Booth; Belle Boyd;
John Breckinridge; Mary Boykin Chesnut; Jefferson Davis;
Laurence Keitt; Thomas Hindman; Dr. Samuel Mudd;
Rufus Rhodes; Robert Rhett; Edmund Ruffin;
Alexander Stephens; John Surratt; and Loretta Velazquez.

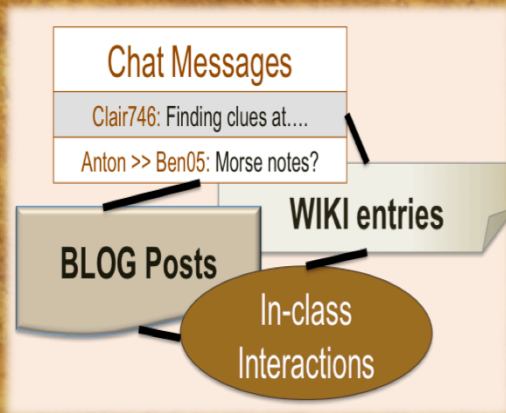
e the clues
ive Fire-Eaters were the first five people in line.
assassin, his two accused accomplices, and the two
were the last five people in line.
University of Maryland graduate was closer to the
d of the line than all the women.
in whose boss's successor got assassinated was
inding next to an assassin's accomplice.
doctor was standing closer to the front of the line
in the actor.
llary-writer was standing between a president and
at president's vice-president.
atent commissioner was standing between two men
had been U.S. Senators in 1850.
ngressman was standing next to another
ngressman from the same state.
f the Fire-Eaters was closer to the
nt of the line than the man who drew
istol in the Senate chamber.
man who fired the first shot of the
vil War was third in line.
iam was the same distance from
mund as "Harry" was from John C.



#4b



Research Design/Methods



On-site player interactions and online artifacts

- Field Notes by researchers
- Physical notes & artifacts created by players

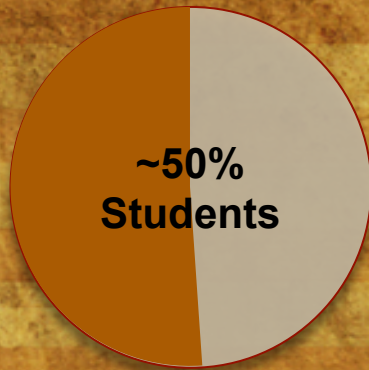
Post-game player Survey (self-reporting)

Adapted from Yin, 2009, Case Study Research: Design/Methods

Player Participation

Individual Accountability

Survey



Individual Missions:

- Most Fun
- Challenging
- Surprising

JENIUS WALL

TimV. I Got A BADGE! (:

[Edit](#) [Delete](#) [View conversation](#)

Ben05 just gd with mission 1. man thats hard. i felt like a fail

[Edit](#) [Delete](#) [View conversation](#)

Ben05 but feel like a boy scout when i get a badge. so proud of myself.

[Edit](#) [Delete](#) [View conversation](#)

Tina05 >> **April G.** HEY APRIL :) I finished my second mission ;)

[Edit](#) [Delete](#) [View conversation](#)

Austin >> **April G.** Yeah. I have been blazing thru my inventor training. :-)

[Edit](#) [Delete](#) [View conversation](#)

Blogs

Anton's Blog (Day 4)

Wheww!!! Just finished two of the missions of cryptographer. Very happy {kinda getting into this game}.

Player Participation

Positive Interdependence

Survey

“You played 3 missions and then a master level that you have to use the skills you learned from the first 3. The last level is the group level where you put all of your skills together.”

JENIUS WALL

Ben05 Who is a cryptographer?
I NEED UR HELP!

[Edit](#) [Delete](#) [View conversation](#)

TanyaE im trying to figure other things i don't even know...
Surveyors!!! Helpp!!!!

[Edit](#) [Delete](#) [View conversation](#)

Blogs

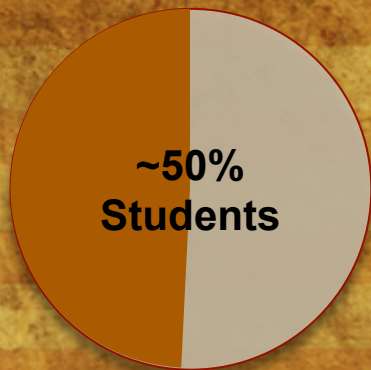
Claire746 (Day 7):

Go under collaborate → wiki → unsolved questions...or to → cabinet of curiosities to find the hidden key phrase, “YOU DELAY BUT TIME WILL NOT.” But I don't know what “A PLACE FOR EVERYTHING” means....can anybody help?”

Player Participation

Promotive Interaction

Survey



"We had to work together and share information."

JENIUS WALL

Myra >> **April G.** i got a 67%. i don't get it.

[Edit](#) [Delete](#) [View conversation](#)

April G. >> **Myra** that's not bad, tho', you're almost there. Ask the JENIUS people for help on that last question.

[Edit](#) [Delete](#) [View conversation](#)

Myra >> **April G.** i got a 100% (:

[Edit](#) [Delete](#) [View conversation](#)

April G. >> **Myra** That's cool! You get a new badge!!! 😊

[Edit](#) [Delete](#) [View conversation](#)

Myra >> **April G.** I Know, Right.

[Edit](#) [Delete](#) [View conversation](#)

Blogs

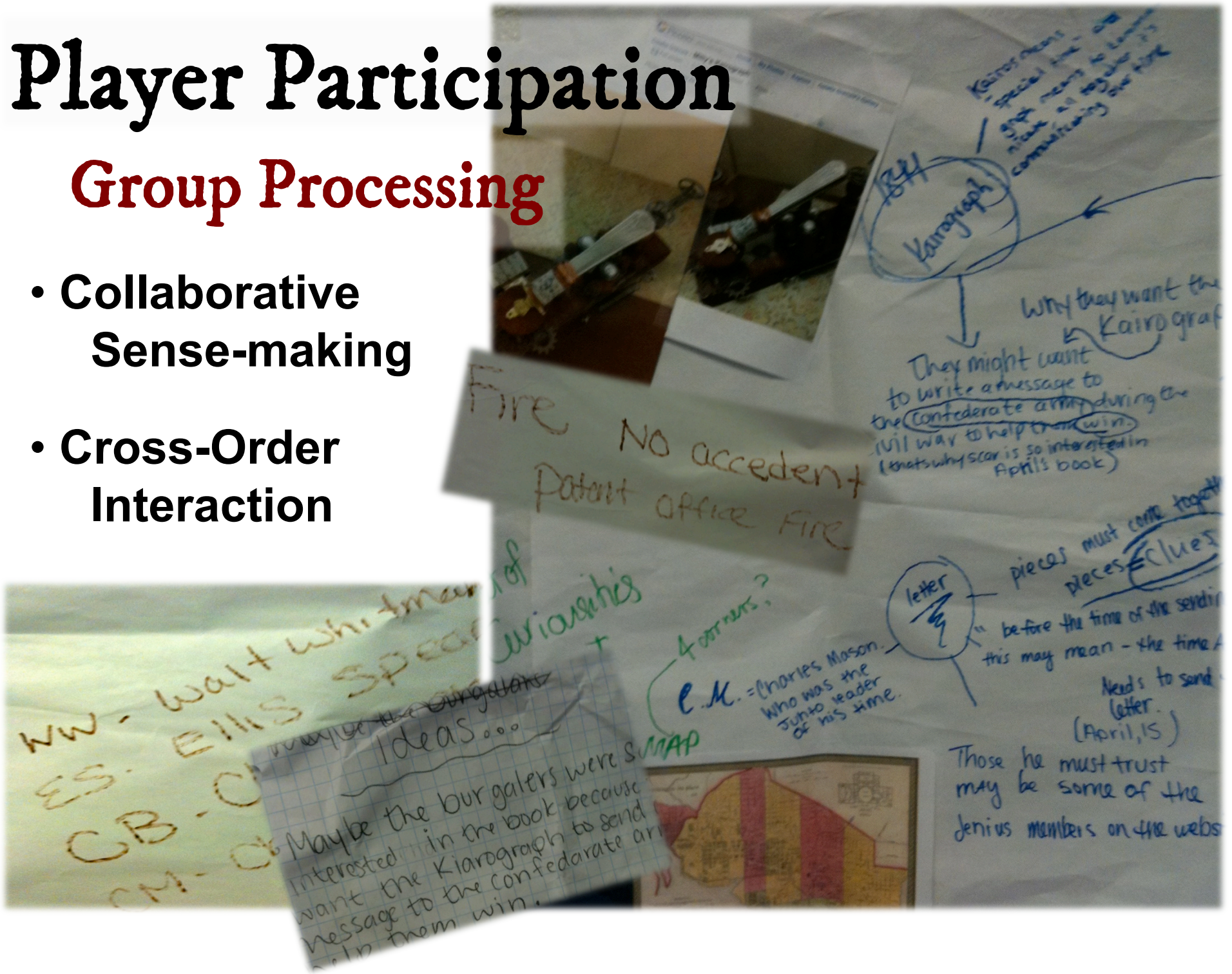
Ben05 (Day 6):

As you know, last week we observed April G's notes on her phone recording. The morse code translated to: Messages Across Time. This is obviously linked to the Kairograph, which can send messages to the past, present, and future...We need to work together for clues & find out why SCAR wants April!!! You can talk to me about my blog at *Ben05*.

Player Participation

Group Processing

- Collaborative Sense-making
- Cross-Order Interaction



Conclusions: **engagement**

“I was saving history.”

“I felt like a spy!!”

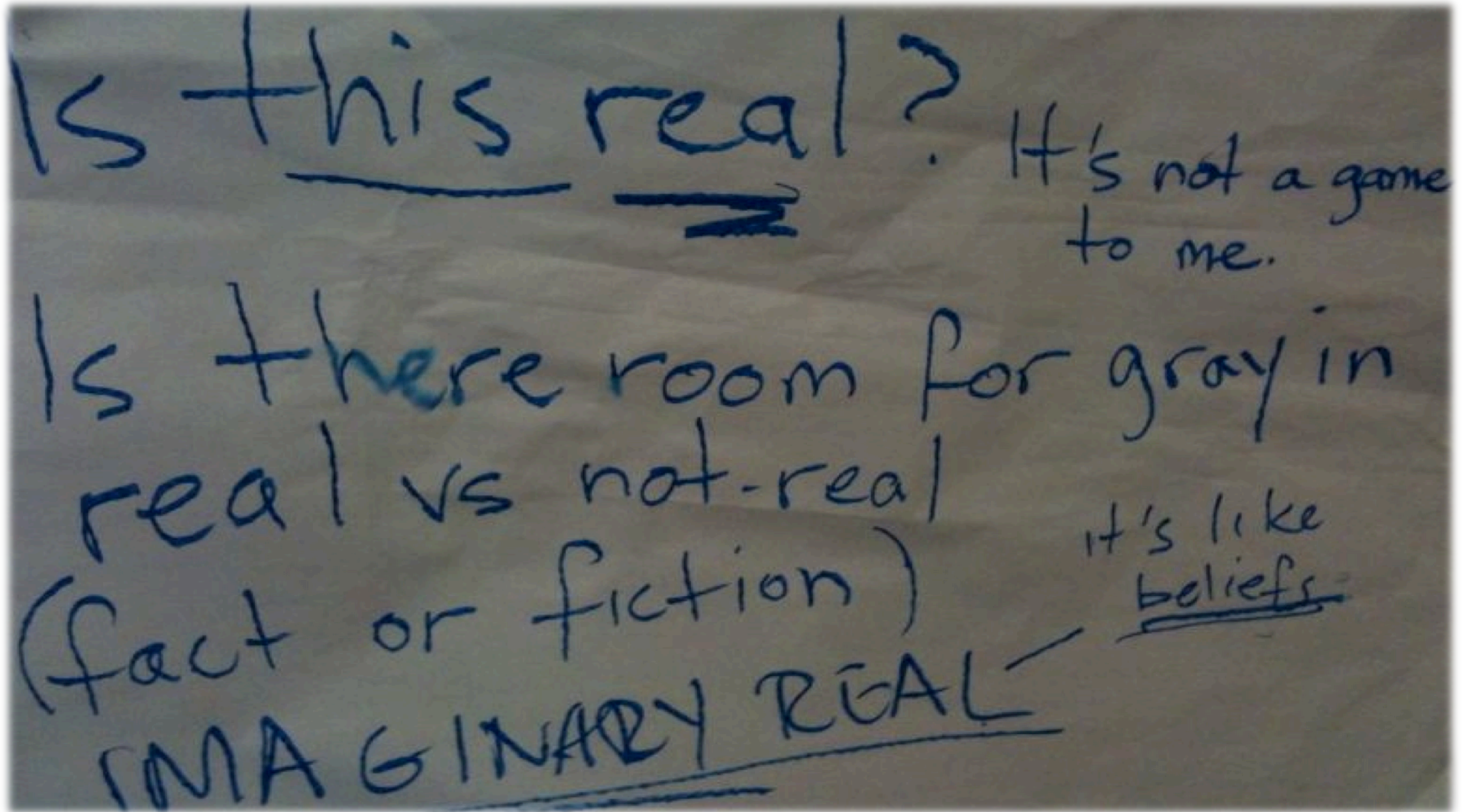
“...the past interacts with you.”

“I actually got into it and had fun.”



Conclusions: **critical thinking**

“It was cool – a strategizing game that keeps you thinking.”



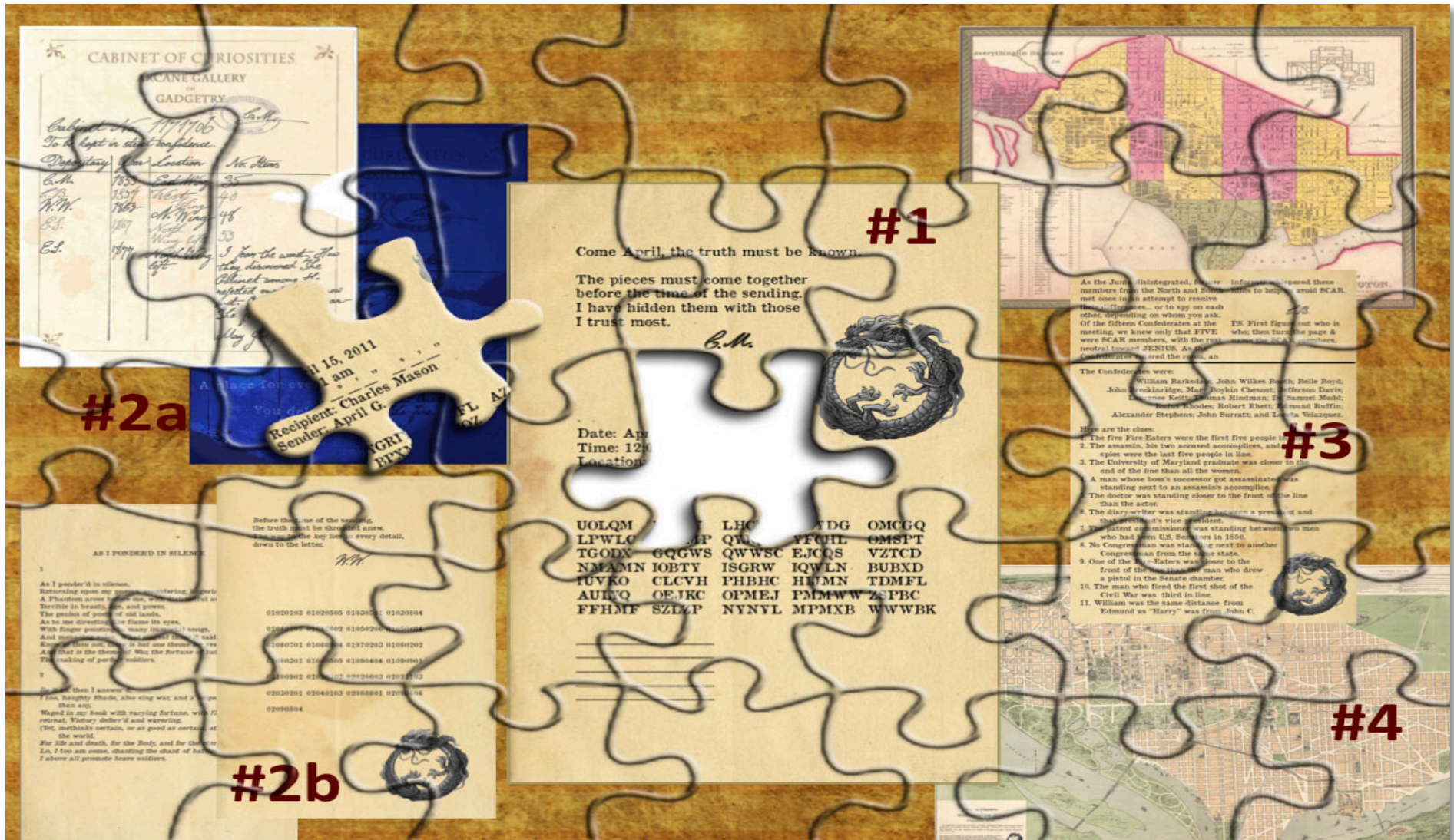
Is this real? It's not a game
to me.

Is there room for gray in
real vs not-real
(fact or fiction)

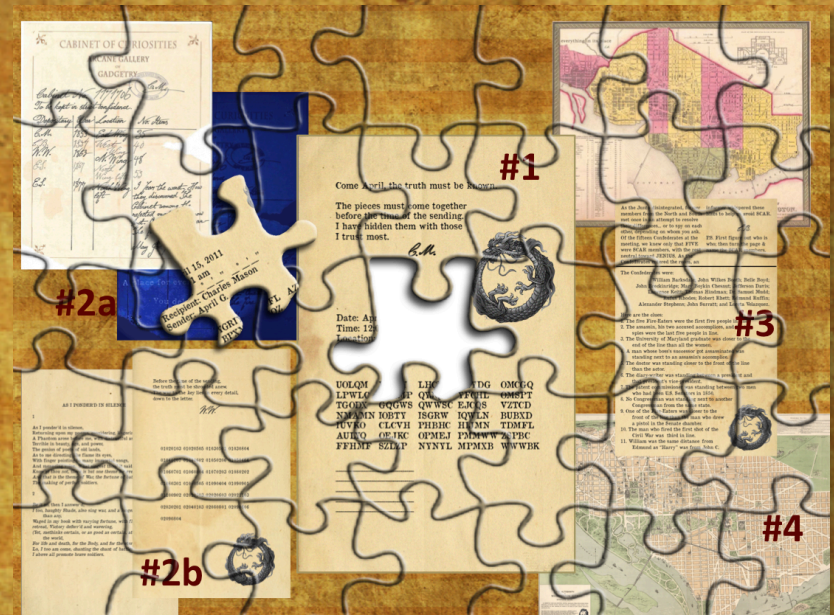
IMAGINARY REAL — it's like
beliefs

Conclusions: interlocking tasks

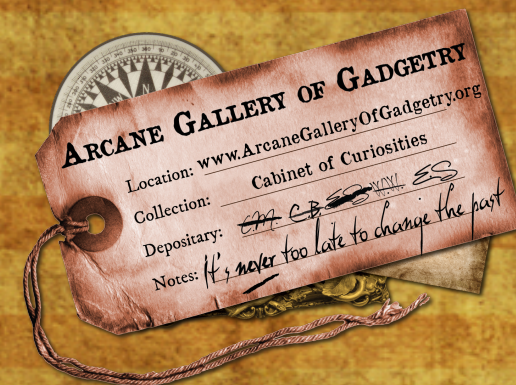
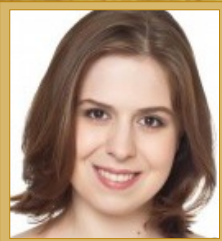
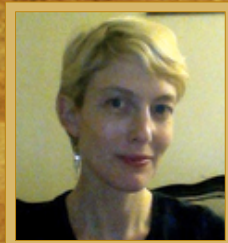
“Teamwork was needed to solve it.” “It was so intricate.”



Thank you!



arcanegalleryofgadgetry.org



Bonsignore, Hansen, Kraus, Ahn, Visconti, Fraistat, & Druin

