

Play Δ Work

Abstract: This paper describes the development and uses of the board game Δ Work © designed to help a group understand how factors of occupation, identity and changes of environment interact to affect quality of life correspondent to degrees of reward, meaning and self-realization.

Kasey Asberry
ITEC 800: Term Project
December 2008

TABLE OF CONTENTS

INTRODUCTION	3
WHAT IS ΔWORK?	4
Order of Play	4
LEARNING OPPORTUNITIES IN GAMESPACE	5
SCREENS OR BOARDS	7
ONGOING DEVELOPMENT	8
Feedback	8
CONCLUSIONS	9
APPENDIX A: ΔWORK KIT COMPONENTS	9
APPENDIX B: USAGE SURVEY	10
REFERENCES	11

FIGURES

BOARD
VYGOTSKY'S CONTINUUM
JAR OF MARBLES
RHYZOME

*But yield who will to their separation,
My object in living is to unite
My avocation and my vocation
As my two eyes make one in sight.
Only where love and need are one,
And the work is play for mortal stakes,
Is the deed ever really done
For Heaven and the future's sakes.
-Robert Frost, "Two Tramps in Mud Time"*

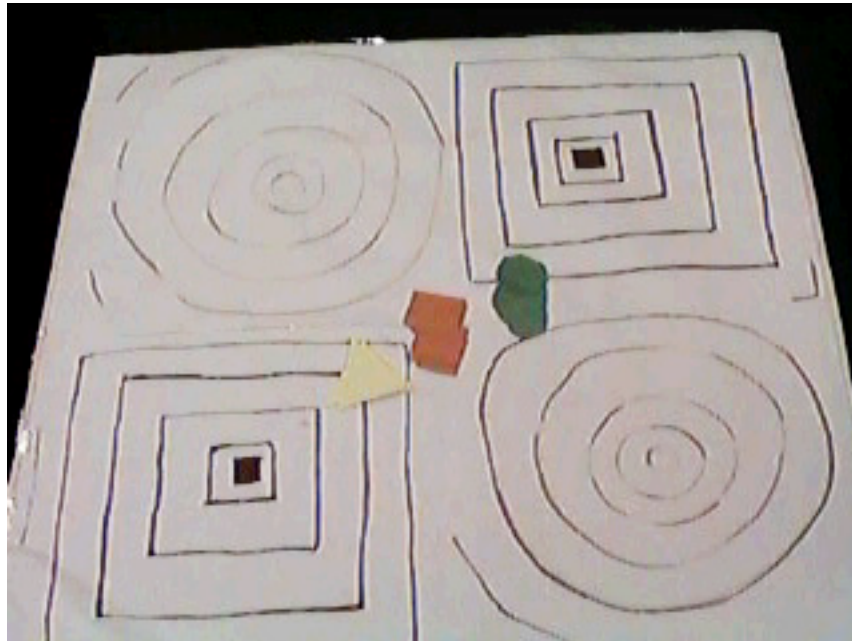
Introduction

Playing to learn about work is an old strategy for humans and one shared with other mammals. In the relative security of the litter the cub conducts experiments with gravity using all available tools for amusement. Much time is devoted to mimicry of siblings and especially parents as the young work to mature into successful adults. For much of human history the transmission of knowledge and expertise about adult life responsibilities and work has been structured through the apprentice-journeyman relationship. Traditional apprenticeship builds upon the skill of emulation first developed in childhood play. Further, maturation to journey-level skill requires reflection as to context and purposes of work. Contemporary worklife frequently lacks both effective channels for transmission of knowledge from journey to novice and social context to examine how work works through our lives.

ΔWork is a game that was first developed during the summer of 1996 at Xerox PARC to provide a social context in which to entertain ideas about the meaning, potential and purpose of work.

What is Δ Work?

Δ Work is a board game which explores ways that factors of identity, occupation and changes of environment (societal, economic, technological) interact to produce quality of life correspondent to degrees of reward, meaning and self-realization.



**The decks are placed on Level 0, circles represent "rise" to +5, and squares represent levels to -5.*

Order of Play

Δ Work is played by 3 – 7 players who place "identity" (circle), "occupation" (square) and "change" (triangle) cards on the 2.5D* board with a verbal rationale for each placement. Players' objective is to activate and effectively motivate the largest number of "workers" before all the cards are drawn. Players may challenge each other's placement or rationale. Consensus determines the success of a challenge. A successful challenge causes that player to discard "id-occupation-change" set of cards (they lose a turn) rather than place a worker on

Δ Work
Asberry

the board. Play begins by each player taking 5 blank "deltas" and writing an event or circumstance on each, turning to deck and shuffling.

Example Turn

Player A draws 1 card from each stack. She places identity, occupation and delta at an appropriate level and gives verbal justification. First turn ends there.

Following turns must take into account placement of other pieces in rationale.

Available from:

<http://humanorigins.org/lab/labproject/delta-work/delta-index.html>

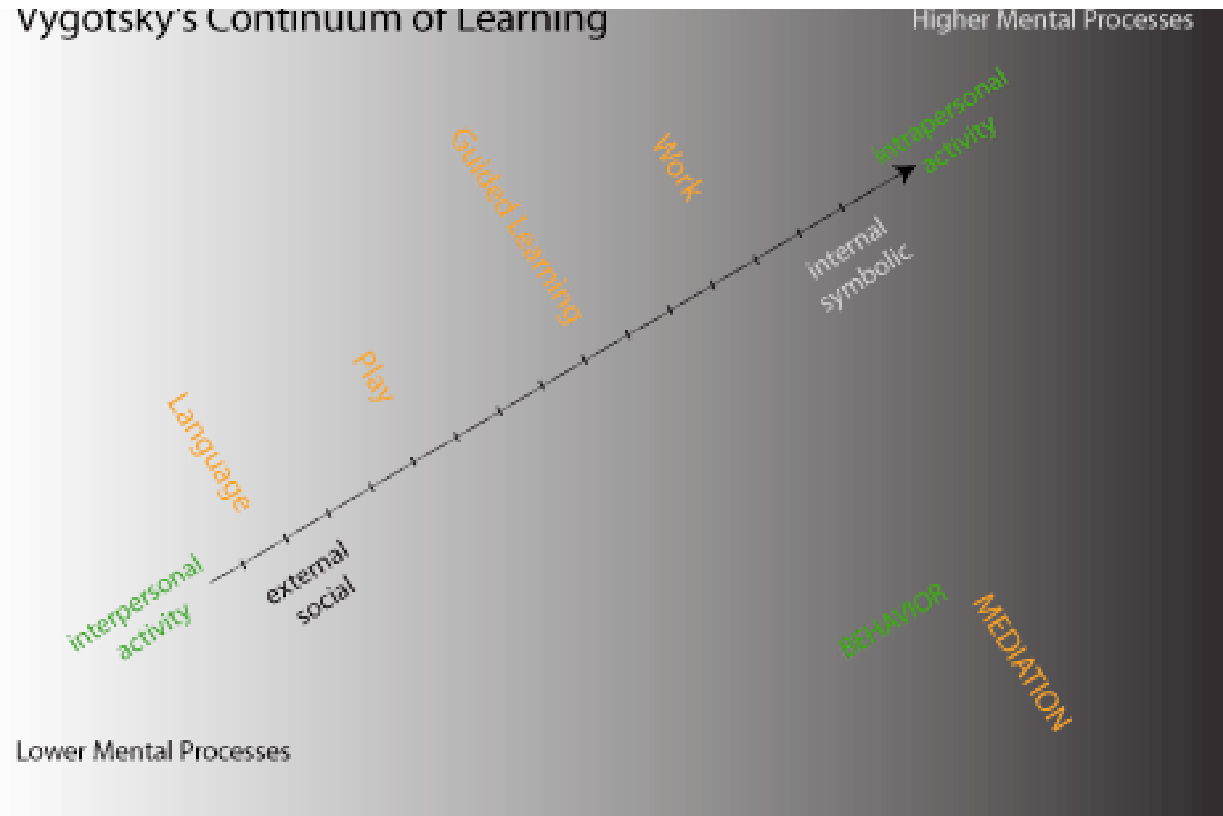
Learning opportunities in gamespace

Early in our lives as workers play is devalued though enjoyed and work is established as unpleasant but important. Gaming affords players the opportunity to suspend this onerous contract and apply concentration, fail without the pressure of catastrophe and practice recovery.

Learning while playing is normal for children

Because playing games provides the context for childhood socialization, for the adult to learn in framework of a game recontextualizes the work of learning as play. This can afford adults the more space for learning because challenge and even failure are part of the game.

Vygotsky's Continuum of Learning



(Kort, et al) Experiencing failure without profound 'real world' consequences fosters coping ability and releases learner from affective confounds.

(Csikszentmihalyi) Opportunity to examine and address ambivalence toward work vs play as valuable and important.

Practice activities that provide flow (high-challenge, high-skill, concentration, creativity & satisfaction) in play which then can be more effectively sought in the work day which through its structure provides purpose, feedback about progress, opportunities to concentrate and be fully utilized.

Screens or Boards



Learning takes the shape of expectations.

Interface choices stimulate specific growth by affording interactions.

- virtualization / simulation or visualization
- distributed or local
- asynchronous or real-time

Technology isn't always the right solution.

*Simple kit will work better than distributed, asynchronous environment to promote growth re social constructivism

(Marivate & Marwala)

(Ghory) Computer-mediated games facilitate procedural (repetitive reinforcement) rather than reflective learning.

ΔWork
Asberry

Ongoing development

Investment of resources in programmed solutions may not produce the most effective learning environment.

Distributing a simple kit may provide more information and stimulate more growth than online, asynchronous environment to promote growth re social constructivism

Plan:

- drive traffic to download game kit & reporting instruments
- Organize usability sessions, “play dates”, with sample groups representative of diverse populations
- Revise rules, explanations & kit based on results of play dates
- License through GNU to protect intellectual property and concept integrity while sharing

Feedback

Notes from ITEC Seminar 800 participants indicated a strong interest in **ΔWork** as a tool for creating discourse about the nature and influence of work. Allowing for a handicap based on general supportiveness of the setting the general response was encouraging to continued development. There were reservations registered with respect to clarity of the rules. Some participants reported confusion about the order of play. I have addressed these concerns by creating an Order of Play sheet as a component to the downloadable version of the game.

Conclusions

As programmed simulations and multi-user game spaces become more readily achievable they are the expected framework for gaming. However, when verbal exchange is the primary goal, face-to-face interactions over a static game board may provide the most dynamic results due to emphasis upon immediacy.

A useful though less than rigorous test of these ideas would be to provide an online version and track results against the face-to-face version. My next paper will treat a design for **ΔWork Online**.

Appendix A: ΔWork Kit Components

Available from <http://humanorigins.org/lab/downloads/deltawork.pdf>

- Cover Letter
- ReadMe.txt
- Board & Decks template (for printing)
- Order of Play & Rules Sheet
- Usage Survey

Appendix B: Usage Survey

Available from <http://humanorigins.org/lab/labprojects/deltawk/survey.pdf>

The survey will be revised as the project develops.

Sample Survey Questions	
Name of Group	
Name of Reporter	
Title of Reporter	
Location	
Number of Players	
Average Age	
Range of Ages	
Duration of Game	
Changes <i>written onto delta cards by players</i>	
Responses of Players	
Comments by Reporter	
How could this game be more	

ΔWork
Asberry

useful?	
How could this game be clearer?	

References

Abrahamson, Dor, Wilensky, Uri (2005). Piaget? Vygotsky? I'm Game!: Agent-Based Modeling for Psychology Research. Jean Piaget Society, Vancouver.

Blunden, Andy (2001). "The Vygotsky School". Available from:
<http://home.mira.net/~andy/seminars/chat.htm>

Clarke, Ruth Colvin (2008). Developing Technical Training. John Wiley & Son.

Czikzentmihalyi, Mihaly (1997). Finding flow, the psychology of engagement with everyday life. Harper Collins. NYNY.

Driscoll, Marcy (2000). Psychology of Learning for Instruction. Allyn & Bacon. Boston.

Denzin, Norman K. (1975). Play, Games and Interaction: The Contexts of Childhood Socialization. The Sociological Quarterly, Vol. 16, No. 4 (Autumn, 1975), pp. 458-478
Published by: Blackwell Publishing on behalf of the Midwest Sociological Society
Available from: <http://www.jstor.org/stable/4105940>

ΔWork
Asberry

Frost, Robert (1936). "Two Tramps in Mud time" A Further Range.

Ghory, Imran (2004). Reinforcement learning in board games. Technical Report CSTR-04-004, Department of Computer Science, University of Bristol.

Kort, Barry (2002). An Affective Model of Interplay Between Emotions and Learning: Reengineering Educational Pedagogy—Building a Learning Companion. MITPress.

Kuhn, Thomas (1962) The Structure of Scientific Revolutions.
University of Chicago Press.

Marivate, Vukosi N., Marwala, Tshilidzi (2008) Social Learning Methods in Board Games. CIG'08: IEEE Symposium on Computational Intelligence and Games, Australia.

Vygotsky, Lev (1987). Collected Works, Plenum Press, NY.

Wiggins, Grant & McTighe, Jay (1998) Understanding by Design. MerrillPrentice Hall.