First Annual Pioneer Showcase
Creative Arts and Research Forum

Artwork by Mary Sue Bailey

Glenville State College
April 5th 2011
Research Abstracts
ADVERTISING AND GRAPHIC DESIGN SEEKS TO INCREASE AWARENESS AND PARTICIPATION OF GLENVILLE STATE COLLEGE’S GLOBAL ENTREPRENEURSHIP WEEK 2010

Justin Brown, Business

The purpose of this project was to create awareness and increase participation among Glenville State College students during Global Entrepreneurship Week 2010. Students in Marketing 379 Advertising & Sales Promotion and Marketing 203 Graphic Design utilized a collaboration strategy to seek increased awareness and participation in Global Entrepreneurship Week events. Marketing 379 students created and executed a non-probability Global Entrepreneurship Week survey of 125 Glenville State College students in a variety of majors, compiled and analyzed the findings using a simple excel spreadsheet. Findings indicated that students were not aware; 12% had never attended a Global Entrepreneurship Week event. Using results of the survey Marketing 379 students developed a creative brief strategy, the basis for Marketing 203 students’ advertising campaign. An entire class meeting was devoted to a collaborative assembly of both classes to discuss the strategy and execution of the project. Information from the creative brief was used by Marketing 203 students to develop the creative print materials for the advertising campaign. Advertising materials included a main poster that incorporated the overall schedule of events and individual posters that design changed but yet remained consistent from poster to poster. Sign-in sheets for each event quantified attendance. Results of the sign-in sheets showed an increased in attendance from the previous year.
Genetic Analysis of Tomatoes Varieties from Appalachian Sources

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ROGER SEEBER and KEN CUSHMAN, Department of Natural Sciences and Mathematics, West Liberty University

Roger Seeber has been accumulating native Appalachian tomato varieties to preserve their genomes for over a decade. This process is work intensive as the seeds need to be planted every five years to keep the genome viable. Genetic analysis of these genomes would allow the information to be stored digitally. To distinguish between the types of these tomato plants, they are to be examined at the molecular level by analyzing the sequences in their DNA. The molecular methods for distinguishing the differences in the strains have yet to be established. Microsatellites, which are fragments of DNA that have repeating sequences, are also helpful in identifying variations among tomatoes. Having genes of interest in mind is also key to this process. Looking at gene sequences for texture, pulp thickness, carotenoids, richness of the juice, color, blight resistance, and the ability to survive in conditions of harsh temperatures, such as droughts, can also assist in distinguishing between different varieties. Methods to be used to determine the differences between the varieties and identify the different tomatoes include isolation of the different tomatoes include DNA extraction, and Polymerase Chain Reaction. The seeds need to be prepared for DNA extraction by removing the protective sacs that surround the seeds. Various methods can be used to extract the DNA from the seeds to be analyzed. We expect to determine the best approach to analyze the genome of these tomatoes and eventually store digital copies of the DNA so that comparisons can be made from the molecular level.
THE EFFECTS OF TEMPERATURE ON INTEGRIN DISTRIBUTION IN THE SYMBIOTIC AND APOSYMBIOTIC TROPICAL SEA ANEMONE, *Aiptasia pallida*

Alicia Rose and Sara Sawyer, Department of Science and Mathematics, Biology

Coral reefs consist of corals that are symbiotic with dinoflagellate algae. The algae provide their coral host with photosynthetically made sugar, and it is this sugar that allows the corals to form the massive calcium carbonate skeletons of coral reefs. Corals are an essential habitat for many reef animals, and their destruction leads to loss of marine diversity. Increased water temperature causes algal loss from the coral, a process known as bleaching. When corals bleach, they lack the essential nutrients given to them by the symbiotic relationship with the algae, which causes the corals to die. We are using the tropical sea anemone, *Aiptasia pallida*, which is also symbiotic with dinoflagellate algae as a model to understand coral-algal relationships. We are investigating the role of the cell-substrate adhesion molecules, integrins, in temperature-induced coral bleaching. We have shown that there is a large amount of integrins localized between the two tissue layers that comprise the tentacles of an anemone. Temperature shock from 25°C to 30°C causes the loss of integrins between the two tissues. This suggests that temperature shock could affect important signaling carried out by the integrins. To view the integrins, anemones were heat shocked for 0, 12, 24, and 48 hours and then preserved and embedded in paraffin. Anemones were than sectioned, mounted on slides and stained for integrins using 2 different anti-integrin antibodies coupled to a fluorescent dye. Integrin staining was visualized with a fluorescent microscope. The current study is investigating whether the integrins of the aposymbiotic anemones, anemones that lack algae, respond to increased temperature in a similar manner as symbiotic anemones. This experiment addresses the issue of whether bleaching is primarily an animal or algal phenomena.
Have you ever had your students moan about how much they hate lab? How about rewarding their hard work with beer? Sound impractical? Not if beer brewing is your lab. Beer brewing is an activity that can be used to teach important biological, chemical, and biochemical processes taught in undergraduate microbiology, cell physiology, biochemistry, botany, and organic chemistry. Brewing is a fun activity that instructors will find retains the interest of the students, is simple, and can be designed to fit into several weekly lab periods. Brewing beer allows for the application of several chemical and biochemical assays to each step of the process including: tests for carbohydrates with Benedict's test and phenol-sulfuric acid assays; tests for protein using the biurets test and Bradford assay; and tests for alcohol content determined using a hydrometer and pocket refractometer. Analysis of “bitter ale” brewed by undergraduates at Glenville State College using these techniques found that protein concentration increased from 0.15 to 0.32 mg/mL from wort to bottle. It was also observed that the carbohydrate concentration decreased from 91.48 to 58.22 mg/mL from wort to bottle. Reducing sugar content also decreased from wort to bottle, while percent alcohol increased from 2.7 % at the end of the first week of fermentation to 4.0 % at the end of in-bottle aging. The most crucial test, tasting, was saved for after finals week and was a huge success. We are currently comparing our previous results with new batches and using more techniques for comparison.
Eriophorum vaginatum is a tussock forming sedge; a tussock is a compact tuft of grass or sedge tillers. Tussocks of Eriophorum vaginatum were reciprocally transplanted along a latitudinal gradient in northern Alaska by Dr. Ned Fetcher during the early 1980’s. Six of the transplant gardens were recensused in July of 2010. Within-tussock species diversity and cover were assessed in each garden for each of three ecotypes (site of origin). Ocular estimation was used to estimate percent cover. Home-site ecotypes were expected to exhibit fewer invasions by other species than ecotypes from other sites. Also, southern ecotypes may be less prone to invasion in northern gardens, than northern ecotypes grown in the south, because of climatic warming trends. Data showed that there was a significant home site advantage (i.e. tussocks originating on the site performed better than non-local ecotypes). Home site tussocks had the greatest proportion of total coverage of Eriophorum vaginatum. Southern ecotypes were the most sensitive to the latitudinal change (southern tussocks exhibited the least percent cover of E. vaginatum at northern sites). For example, in Prudhoe Bay the northern most site, the No Name Creek tussocks, the southernmost site, showed the lowest proportion of total coverage of E. vaginatum recorded. Either global warming was not sufficient to enhance performance of southern ecotypes in northern latitudes or other environmental factors had a greater influence on tussock performance than temperature.
Teaching undergraduates the laboratory procedure of bacterial gene transfer and what it means for protein expression and purification.

Brooke Andrews, Craig Arthur, Corey Curry, Gary Morris

Competent cells, which are specially treated bacteria such as *E. coli* DH5a, can be manipulated to take up DNA and express genes from this DNA, thus converting the bacteria into chemical factories for protein synthesis. This process is known as transformation. DH5a cells can be transformed with a pBR322 plasmid which encodes the *tet*R gene that renders the cells tetracycline resistance. Here we transform DH5a cells with pBR322 to learn the technique of transformation. Once proficient cells will be transformed to express and purify cAMP (cyclic adenosine monophosphate) dependent protein kinase. Transformation of DH5a cells with pBR322 was successful as seen by consistent growth of transformed bacteria on plates that did have the tetracycline and no growth on the plates that had tetracycline and bacteria that were not transformed. DNA from transformed bacteria was extracted and purified using one of two commercially available kits (BioRad Plasmid Midiprep Kit or Quiagen Plasmid Maxiprep kit) and analyzed on agarose gel and with spectroscopy. We will also practice transformation of cells using pFluoroGreen and pFluoroBlue plasmids, which express proteins that fluoresce under a long wave UV light allowing easy determination of successful transformation of bacteria, without the use of antibiotics. Once proficient we will transform *E. coli* competent cells with an *amp*<sup>R</sup> PKA-expressing plasmid. PKA (cAMP dependent protein kinase) is a protein that acts along several signaling pathways of animal cells. After successfully expressing PKA we will be able to do further biochemical research with the cAMP-dependent protein kinase.
Two-factor theory of love: Fact or Fiction?

Gina Hamilton and Stacy Adkins, Behavioral Science, Psychology Department

The aim of this study was to test Schachter’s two-factor theory of love which, in essence, is that people who experience physical arousal (increased heart rate, adrenaline flow and/or breathing rate) have increased romantic feelings. We believed the content of the arousal situation (physical arousal due to a sexual presentation) could override the two-factor theory due to provocative content. We intentionally increased arousal in the experimental group of students at a small liberal arts college while minimizing arousal in the control group of other students. We hypothesized that the attractiveness ratings of the presenters would be lower for the experimental group compared to that of the control. However, we found no significant difference between the groups.
This experiment was done as part of a fundraiser for a family who lost their house to a fire. This experiment was to verify the hypothesis that people will smile more often when someone is moving a stuffed animals arm in a waving motion more so than when someone is not doing any interaction with the animal. We had a natural group design-the groups were all part of the college either students or staff at the college and they all visited the Musket. The application of this work would be considered under the Psychology/Sociology field. The importance would be that stuffed animals can and do lighten peoples spirits/mood enough to make them smile and stuffed animals could help with depression or help children in traumatic situations to feel not so alone. This study could be used to confirm that sales can be increased by interaction with the product they are selling. The study was conducted over two days and for two hours each day. The first day and the first hour the presenter did not move Willie’s arm the co-presenter noted on tally sheet if people smiled or not and at what distance. First day-second hour, the presenter waved Willie’s arm and co-presenter noted if smiles and at what distance. Day two-first hour, presenter waved Willie’s arm and co-presenter noted if smiles and at what distance. Day two-second hour, presenter did not wave Willie’s arm and co-presenter noted if smiles and at what distance. The experiment hypothesis was proven true. There were more people who smiled when Willie’s arm was waved than when Willie was sitting still. The implications of this study could be used to confirm that sales can be increased by interaction with the product they are selling.
EFFECT OF \textit{AILANTHUS ALTISSIMA} ON A SOIL MACROINVERTEBRATE COMMUNITY

Christina Schreckengost\textsuperscript{1}, Dr. Milan Vavrek\textsuperscript{2}, Dr. Sara Sawyer\textsuperscript{1}, Biology, Science and Mathematics Department, Department of Land Resources

\textit{Ailanthus altissima}, Tree of Heaven, is an invasive species that’s becoming a dominant species in disturbed areas of West Virginia. We examined the effect of \textit{A. altissima} on the soil macroinvertebrate community of a hardwood forest (Glenville, WV). The leaves of \textit{A. altissima} contain compounds with insecticidal properties; it is not known whether these compounds affect soil macroinvertebrates as a result of leaf litter deposition. In a previous study, we quantified the abundance and richness of macroinvertebrates present in three conditions: 1. forest plots with and without \textit{A. altissima} 2. Forest plots with and without leaf litter and 3 forest plots with reciprocally “transplanted” leaf litter. Macroinvertebrates were collected each week for four weeks using pit-fall traps. Invertebrates were identified by order, counted and abundance and richness was assessed. The results showed \textit{A. altissima} leaf litter had little effect on abundance or richness of soil macroinvertebrates, except for members of the orders Collembola and Isopoda that showed increased abundance in soil with \textit{A. altissima} (p<0.05). These results suggest that leaf litter from \textit{A. altissima} does not have the insecticidal properties of fresh leaves. To confirm these results we repeated the experiment to compare macroinvertebrate abundance and richness in forest edge areas with and without \textit{A. altissima}. The results from this study also showed that the overall richness and abundance of the macroinvertebrates was the same in areas with and without \textit{A. altissima}. There was an increase in abundance of insects from the orders Isoptera, Orthoptera, and Hemiptera in areas with native species compared to areas with Tree of Heaven. In general, these insects are significant herbivores pests. Insects in the order Hemiptera are usually specialists, preferring one to a few species on which to graze. In areas where \textit{A. altissima} is present, there was an increase of abundance of insects from the orders Hymenoptera and Coleoptera. These insects are often generalists and can have a great impact on soil turnover and soil quality. Based on these findings, \textit{A. altissima} would see reduced grazing pressure, and potentially increased soil quality compared to native tree species. These factors could give \textit{A. altissima} an advantage over native species in getting established in an area. To further understand the effect \textit{A. altissima} has on soil community structure, we are also looking at soil microinvertebrates in areas with and without \textit{A. altissima} to determine if \textit{A. altissima} leaf litter has an effect on less mobile animals.
Canopy gaps or openings directly influence species composition, structure and regeneration. In this study, we determined the understory communities under various gap sizes (open, medium and closed canopy) in an oak dominated forest in Gilmer County, WV. There were three plots (1x1, 5x5 and 10x10 m) established at each gap size and each plot consists of three subplots where specific vegetation types were surveyed. Mid tolerant species like red maple (Acer rubrum), red oak (Quercus rubra), and black cherry (Prunus serotina) were found colonizing the large and medium gaps along with tolerant species such as dogwood (Cornus alternifolia) and American beech (Fagus grandifolia). Closed canopy plots tend to be dominated by both tolerant and mid tolerant tree species. Greenbrier (Smilax spp.), multiflora rose (Rosa multiflora) and autumn olive (Eleagnus umbellata) dominate all gap sizes indicating the ability of these species to survive under different light conditions. Japanese stilt grass (Microstegium vimineum), an invasive species, dominates all gap sizes and is known for its seed vitality, shade tolerance and fast growth. Although not statistically significant, diversity and evenness of all understory species were found to be higher in large gaps compared to both medium and closed canopy plots. Diversity of shrub species was found higher in closed canopy plots than large gaps. The attributes of canopy gaps such as size, shape and disturbance origin affect the forest characteristics. The future of our forests largely depends on the survival of the understory tree species that eventually determines the dominant forest cover type.
Creative Arts Abstracts
The Extinction of Art: La Jodienda*

Harmonia Rosales,
Education 5-9

Society has lost so much of our individualism by way of technology. Art created by man is becoming less valued and appreciated due to advanced technology that can mimic a brush stroke. Technology has bred a whole new kind of artist, the digital artist, one who with a few simple equations and codes can create a picture just as good as a traditional artist would in just half the time. However there is one key ingredient any master piece must have that a computer can never simulate, heart and soul. The portrait of La Jodienda is done all by hand in the traditional manner, charcoal on paper/newspaper, in doing so one can observe the textures, imperfections and charcoal grain that adds to the portraits richness. This is to show that no amount of technology can beat the human touch.

*La Jodienda is a term of endearment used in the Spanish culture to describe a pesky, annoying child or troublemaker.
The two poems I have selected are intended to convey the idea that imagination turns natural settings into supernatural settings. My motivation for writing these poems comes from personal experience and from wishing to show others that adding imagination to anything can enrich and enhance their lives. Nature also plays an important part in opening someone’s mind. Out in nature, everything seems surreal so it is easier to see the world with your mind’s eye. Many things have to come together for people to learn how to effectively use their imaginations to make their natural settings more supernatural, but once they do, their lives will never be the same.
THE PRESENT ART BLEEDING ON TO THE PAST

Sarah Normant
Biology/Minor: Art

This collection of pictures visually shows the evolution of not only the type of artwork, but as well as the content has changed over the years. The “Coca Cola” trademark was painted on buildings as an advertisement back in the day. The first fountain soda “Coca Cola” was enjoyed in 1886. In 1893, there were famous spokespersons, and advertisements created and distributed. In these photographs, the Coca Cola Trademark is fading away, and into the past. This building is one of the many older brick buildings in downtown Weston, WV. These photographs capture the way some people do not respect the original artwork, and paint graffiti over it. Vandalism is one of the many reasons the original advertisement paintings no longer exist, but it just goes to show how the culture has changed throughout the years. These photographs show people a part of the past, but also a part of the present. The material used was an r451c Samsung Straight Talk Phone Camera. The Coca Cola painting on the brick building really stood out. More than one angle of the brick building was taken, and there was no flash and no zoom involved. In Conclusion, these photographs show the age that the painting suggested, and the age of the graffiti that masked it.
“C’EST DES CONNERIES!”

Jade Nichols
English

What is “real art”? Often, “real art” can be identified by the rote response one receives upon simple questioning. Ask what the Mona Lisa is and you will hear, “Ah, well, yes, that one’s by da Vinci. His crowning achievement.” We can certainly pinpoint what we’ve been told “real art” is, but what infallible criterion differentiates a chef-d’œuvre from a steaming pile of merde? This question is best answered with more questions. Why is the Jersey Shore so popular? Why is Shel Silverstein always quoted at graduations? These things are wildly trendy and persist because they appeal to a broad if uninitiated audience. The popularization of an artist is a complete reversal of this bee to honey scenario; the ends, however, are strikingly similar. An illustration: a few high-brow academics decide an accidental upsetting of paint shows potential and the next thing you know, Jackson Pollock is knee-deep in canvass. The unintelligibility of their litmus test for quality is inversely proportional to the masses willing to accept such an assessment.

What factors can be evaluated for superiority? Some point to technique and variation as a means of quality assessment. For instance, the manipulation of chiaroscuro in any medium affects the entirety of the composition. Consequently, contrasting light with dark can significantly alter the perceived tone of a piece, modifying its meaning. Extrapolating the truism that meaning is subjective, we find that art is also a purely individual experience. With these manipulations in mind, my submissions were conceptualized with inherent purpose; color, medium, and technique collaborate in my synthesis of aestheticism.

Perhaps the only way to assess the worth of a work is through the arousal of augenblick, “a particular configuration, a slant of light shot in the open eye.” This moment of purity, authentic aestheticism, while always tinged with emotion, is achieved in the absence of extraneous conjecture. It may be widely heralded as a masterstroke but nobody is dropping trou over Whistler’s Mother.

In short, the best critic is you. These photographs, ink drawings, and paintings appeal to my aesthetic sensibilities, which is the clearest indication that they have inherent value. Every variable of an artwork can be manipulated ad infinitum, carved and sculpted to the ends of perfection. But, if you aren’t struck with the brilliance of a work or at least a pang of resonance, that piece is utterly worthless. It’s okay to say “c’est des conneries!”
In a tavern somewhere in a small western Indiana town, the atmosphere is upbeat and happy. People are dancing and laughing. They are drinking some alcohol. Beers mostly, but no one is out of control. It is an older crowd of solid Midwesterners who rarely get out of control. They are farmers. Or loggers. Or mechanics. Or maybe in the oil and gas industry. They are not the kind of people who can spare the luxury of getting out of control. They have to face each other at church the following Sunday.

The Prairie Dogs are making a rare foray into rural Indiana. They are entertainers well schooled in the kind of music Midwestern farmers who rarely get out of control want to hear: classic country/western titles, a little bit of old rock-n-roll and some traditional bluegrass. They play music you can feel good about the following Sunday when you see your neighbors – who also happened to be at the local tavern the previous Friday. Everybody is happy and no one is out of control. Suddenly, one of the patrons grasps his chest and collapses and a voice cried out, “Doesn’t anybody know CPR!”

It should have been a routine Friday night gig in a small-town tavern. What happened to make that night so different from every other gig the Prairie Dogs had played every Friday, and Saturday night for the past six years?
Phoebe is a college student that has signed up for a field trip to Seneca Rocks. She wants to prove that she is more than just a pretty face. Within the field of biology many of her superiors do not take her seriously since she is a cheerleader. By going on this field trip she is hoping that she can get a foothold that she so desperately wants. Phoebe is unfamiliar with the area she is entering. She finds herself lost within the wilderness. The native blood runs through her veins, and she wants to stay there for eternity. During their first night around the camp fire they tell about the legend of the Indian Princess who killed herself for love. Phoebe believes how stupid it is to die for love. Love is something that just fades with nothing left behind but dust. Little does she know that her thoughts about love are just about to change when she comes face to face with her own past. The lesson to be learned is that love always lasts throughout the ages even when you’re dead.
TRAPPED and IMPARTIAL

Matthew David Thompson
Marketing Major

TRAPPED

TRAPPED is a representation of the pressure that society puts on individuals through media outlets. The criteria that one must live up to, as seen in mainstream advertising, can cripple self-esteem and positive body image. These feelings can make a person feel trapped. I have used mixed media including found objects, printed images, paper machet, and paint. This piece hopes to bring awareness to its audience about the dangers of pop culture and should make one analyze their own life contrast to the popular ideal.

IMPARTIAL

IMPARTIAL generates an internal debate on the topic of abortion. The graphic images presented both on the figure and by the dismembered dolls raise the question: which is worse? The death of an infant or the reasons to have an abortion? I have used mixed media including using found objects, printed images, paper machet, paint, and baby-doll parts. This sculpture should leave its audience questioning their own ethics on the subject matter. This is neither a pro-choice or pro-life piece, it is impartial.
THE OMNISCIENT ONLOOKER

Cary Barlow

Social Studies Education

In this work, the Omniscient Onlooker watches as his city burns itself into obliteration, uncaring and as cold as the steel of his armor. To create this piece, I set before myself the goal of furthering my mastery of visual arts by creating a Pen and Ink style watercolor painting. In order to make a Pen and Ink painting, I first started with a light pencil sketch of the background and worked forward to the callous paladin in the foreground. After the light sketch, I then used the “wet on wet” style of watercolor painting to apply a grim, overcast grey sky. Next I began to paint in the paladin of the foreground from lightest to darkest hue and the same with the rest of the background. Thirdly, I painted in the smoke being emitted from the buildings, and used a pen to add detail and contrast to the cold paladin. Throughout the entire work I learned more about the attractiveness and appeal of the Pen and Ink style of water coloring and the added value of using the cross-hatch method of shading. In conclusion, the technique was fun and enlightening, and I am very pleased with end result.
MY STORY

Gina Hamilton,
Behavioral Science

The poem was written approximately two years after my traumatic experience of
domestic violence. I wrote the poem as a way to cope with the traumatic event I had incurred. It
is basically a brief summary of the way I felt at the time and how I felt two years later. My life
has dramatically improved even more since the poem has been written. I have read this poem at
the Randolph County Domestic Violence Candlelight Vigilance the past two years in hopes that
it may help another realize that one can succeed in surviving the trauma.