Paper Abstracts

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New Takes on Old Themes: A Look at Chinese Socio-Political Conditions

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Presentation Subject Area: Social Sciences

The rapidity and pervasiveness in which events that were once kept secret are now reported has led to greater awareness of international events and a greater response by the world community. This form of globalization has caused a major shift in the world's attitude toward the treatment of people. It has also lead to an outcry against real, suspected, or perceived violations of the rights of the world's citizens. In the area of human rights, there are many rogue nations that refuse to adhere to the presently evolving universal human rights standards but few countries are more under the microscope than China. China's status as a highly influential state, both economically and politically, leads many to wonder why she persists in violating contemporary human rights standards. Perhaps China's persistence is due to the influence of Confucian traditions in their society, remnants of now outdated communist ideology, or just Chinese history alone. Which ever it is, China's socio-political reasoning behind her actions has led to her scrutiny and her being placed at a focal point in a call for international human rights standards.

Evidence for possible involvement of IGF type II receptors in regulating growth of two concomitant dominant follicles in cattle

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In a population of cattle selected over 25 yr for twin births (USDA, Clay Center, NE), natural double ovulations result from the simultaneous formation of two dominant (ovulatory) follicles within a wave of growing cohort follicles rather than ovulation of single dominant follicles from two consecutive waves, and is associated with elevated systemic and intrafollicular IGF-I concentrations. However, identification of intraovarian factors that are associated with the formation of two simultaneously developing dominant follicles has remained elusive. Recent evidence has implicated the IGF type II receptor (IGF2R) as a possible regulator of follicular function. Therefore, gene expression of the IGF2R and LH receptor (LHR) in granulosa (GC) and theca (TC) cells as well as estradiol (E2) and progesterone (P4) levels in follicular fluid (FF) were quantitated in cows selected (Twinner) and unselected (Control) for twin births and multiple ovulations. Cows were slaughtered between day 3 (at early follicle selection) and day 6 (at early follicle dominance) of an estrous cycle, and ovaries collected. The largest three follicles from each cow were snap frozen in liquid nitrogen, and FF, GC and TC separated and collected. Total RNA from GC and TC was extracted, and levels of LHR and IGF2R mRNA were quantified using multiplex real-time RT-PCR and expressed as relative mRNA abundance normalized to constitutively expressed 18S ribosomal RNA. Follicles were ranked F1 through F3 based on their diameter and estradiol (E2) level in FF; F1 and F2 had greater diameters and FF E2 levels than F3, but no differences in FF progesterone levels were observed among F1, F2 and F3. Twinner cows had on average larger ($P<0.0001$) F1 and F2 with greater ($P<0.001$) FF E2 levels than control cows. Expression of LHR mRNA was greater ($P < 0.05$) in GC of F1 and F2 versus F3, whereas levels of LHR mRNA in theca cells did not differ among the largest three follicles or between control and twinner cows. Abundance of IGF2R mRNA in TC of F1, F2 and F3 of twinner cows was less ($P<0.05$) than control cows particularly on day 3. In GC, IGF2R mRNA abundance was less ($P<0.05$) in F2

of twinner than control cows. Follow-up in vitro studies indicate that IGF-I decreases IGF2R gene expression and numbers of IGF2R in granulosa cells, and that IGF2R sequesters free IGF-II reducing the amount of IGF-II that can bind to the IGF type I receptor. In conclusion, our data support the hypothesis that reduced theca and granulosa cell IGF2R levels in early developing cohort antral follicles of twinner cows, induced by increased IGF-I, may increase the amount of free or bioavailable IGF-II which in turn may act in an autocrine or paracrine fashion to regulate follicular development such that two cohort follicles are selected and become dominant.

Barriers to E-Procurement Adoption: When They Really Matter

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This article develops a model to explain the potential relationships that affect the adoption of electronic procurement techniques from a business customer perspective. The model was drawn from a comprehensive investigation of literature that addresses various issues in e-procurement adoption. Perceived drivers, perceived internal barriers, and perceived information barriers are proposed as antecedents to e-procurement adoption. Data were collected from a sample of companies in construction industry. Results showed that perceived drivers were the main predictor; more specifically, cost reduction as a primary driver that marketers should focus on in their attempt to target their customers. Internal and information barriers, however, were significant only when business customers were engaged in a new buying situation.

Designing Apparel: Convergence of Natural Dyeing with the Traditional Korean Aesthetic of Hanbok

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The purpose of this project was to develop a design collection through combining the wholesomeness of natural dyes with the philosophy of the Hanbok, Korean traditional costume. Within this design process, it was important to examine the range of possibilities for types of 20 natural dyes and a collection of natural fibers (cotton, linen, silk and wool) and several mordants (alum, chrome, copper, and iron) to identify the best options for showcasing the beauty of the natural dyed colors. The Korean traditional dress philosophy of Hanbok was used as inspiration for conceptualizing four apparel designs.

Why are natural dyes wholesome? The most important reason for choosing to use natural dyes is the therapeutic benefits of natural dyes. Naturally dyed cloth is healthier than chemically dyed cloth. Sometimes, people who have sensitive skin like babies have problems with the chemically dyed cloth. However, naturally dyed cloth does not have that kind of problem on the body. The second reason is protecting nature. Natural dyes do not cause any pollution in our world because all material used in natural dyeing came from nature without any chemical addition. In the future, more people will want to use natural dyes as more people realize the pollution that is created with the use of synthetic, chemical dyes.

Korea was a strict patriarchic culture that followed the religion of Confucianism. The philosophy of Hanbok expressed through Korean traditional costume features beauty of the form defined by silhouette and with limited exposure of bodylines. Hanbok typically included 100 percent natural fabrics that were more believed to be beautiful when dyed with natural dyes than synthetic fabric and synthetic dyes. Another characteristic of Hanbok is generous use of layering. Women put on layers of clothing because of the Confucian edict that says females should never reveal their flesh to others. The layers of undergarments resulted in a voluminous lower body with a curvaceous silhouette because a woman wore a tight-fitting, blouse under her Chogori (Kum, 1998). Layering also aids in featuring natural dyed colors because many naturally dyed colors can be placed in many layers. Thus, Hanbok, the Korean traditional costume, was a very appropriate and effective means for expressing the beauty of naturally dyed colors in natural textiles. Beauty and wellness converged to contribute to an apparel collection that expresses the need to consider wellness throughout the process of designing apparel.

Relationship Between Religious Exposure and Self-Concept as an Explanation for Individual Influences

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Presentation Subject Area: Social Sciences

This study sought to examine the relationship between early religious exposure (emphasis on specific behaviors) and an individual's self-concept. It was hypothesized that individuals with parents who emphasized religion in the home and exposed them to religion often will have a higher self-concept, versus individuals with little or no exposure and emphasis. Because of the continued development of identity and self-concept during adolescence and young adulthood, it was also hypothesized that the younger participants who experienced higher religious emphasis would also have a higher self-concept apart from the rest of the group. The participants were 123 undergraduate and graduate volunteers from the University of Central Oklahoma and employee volunteers from Oklahoma Farm Bureau Mutual Insurance Company. The researcher developed a 42-question survey using previously developed surveys that included religious participation and self-concept. The first correlation calculated between the religious participation score and the total self-concept score produced no significance. A one-way analysis of variance also revealed no significance between age groups. The findings of this research did not concur with the findings of previous studies and the results indicated that early religious emphasis (exposure) did not correlate with a higher self-concept.

Body Image Dissatisfaction and Eating Behavior Differences in Boys and Girls

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Presentation Subject Area: Social Sciences

Current literature suggests that a significant proportion of adolescents may not be satisfied with their weight and want to change it. Previous literature examining gender differences in relation to body dissatisfaction is very inconsistent and tends to focus on women and girls. Some studies have found that

boys and girls typically show comparable levels of overall body esteem through much of childhood, whereas others have shown that girls indicate a significantly greater desire for a thinner figure than do boys, although there are no significant differences in their BMIs. Overall, there appear to be gender differences in satisfaction and concerns with weight and shape, with girls showing more dissatisfaction than boys. The focus of this study is to look at the relation between gender, children's body dissatisfaction, and eating behaviors. This study is to help clarify some of the previous eating behavior and body dissatisfaction literature in regard to gender differences.

A total of 75 participants were recruited for this study. Participants consisted of boys and girls who ranged in ages from 9 to 13 years old ($M = 10.35$, $SD = .96$). Each of the participants completed the Body Image Silhouettes (BIS) and the Eating Behaviors and Body Image Test (EBBIT). In the BIS participants were asked to select both their perceived body size and ideal body size. The participants eating behaviors was measured with the EBBIT, a 38-item self-report questionnaire that consists of two factors. Factor 1 measures restrictive eating behaviors and body image dissatisfaction (Body Image Dissatisfaction/Restrictive Eating: BIDRE). Factor 2 is a measure of binge eating (Binge Eating Behaviors: BEB). After administration of the test measures the child participants were weighed and measured. Each child's Body Mass Index (BMI) was calculated by dividing their weight in kilograms by height in meters squared

With the BISDIS as the criterion (BMI and gender were the predictors in each of the regressions), the model was significant for the final regression, $F(2, 72) = 20.91$, $p < .001$. For the BIDRE factor, the model was also significant for the final regression, $F(2, 72) = 9.60$, $p < .001$. Lastly, the BEB factor, the model was not significant for the final regression, $F(2, 72) = .61$, $p = .55$. It is important to note that gender was not a significant predictor for any of the regression models, which is contrary to the research hypothesis.

The purpose of the present study was to examine how gender differences were related to body dissatisfaction and eating behaviors in preadolescent girls and boys. Gender differences in body dissatisfaction, restrictive eating, and binge eating behaviors were expected in this study. However, no significant gender differences were found, which indicates that both boys and girls should be studied with regard to their level of body image concerns. Typically, the research has focused on girls and women with regard to body image concerns and eating disorders, and further research is needed using boys and men as participants in order to determine what factors contribute to their body image concerns.

Effective Behavior Support: Oklahoma Educators' Response Of Current School-Wide Positive Behavior Support Practices

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Presentation Subject Area: Education

The purpose of this study was to investigate what kind of behavior support practices are currently found among various Oklahoma schools and whether these practices promote positive behavioral outcomes. The researcher hypothesized that graduate students would report satisfaction levels for current behavior support practices in statistically significant patterns. The researcher further speculated educators who have taught 6-10 years would be more likely to rate practices as being 'in place' and not in need of much improvement than other experience categories. The researcher utilized a non-random convenience sample of 65 participants who were graduate students enrolled in education classes at a mid-size university located in the Midwest. The researcher composed a 24 question survey using previously developed items from a study

conducted by Lewis and Sugai (1999). Outcome of a frequency table was run on the educators' response of satisfaction and the results failed a test of significant difference. Insights were gained from the given responses of the educators who were dissatisfied with current behavior support practices.

Evaluation of the Exchangeable Effector Locus of *Pseudomonas syringae* as a potential signature for Microbial Forensics

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Agriculture is economically important, and US crops are vulnerable to accidental or deliberate introduction of pathogens. *Pseudomonas syringae* is a gram-negative plant pathogenic bacterium that is divided into pathovars by host range. Several strains of *P. syringae* have been sequenced, including *P. syringae* pv. tomato DC3000 which causes bacterial speck of tomato, and *P. syringae* pv. syringae B728a, causal agent of brown spot of bean. *P. syringae* shares survival and virulence mechanisms with pathogens that are currently on the USDA APHIS select agent list, but is a model pathogen that can easily be utilized for forensics without biocontainment facilities. The type III secretion system (TTSS) of *P. syringae* is important in the plant-pathogen interaction, and is located in the genome next to the exchangeable effector locus (EEL). This effector region, which is presumably involved with host specificity, represents a potential signature that could be used in forensic identification. Previous studies have predicted that a correlation may exist between variability in the EEL region, and the geographic origination of strains. In the current study, conserved regions of EEL genes were amplified by polymerase chain reaction (PCR), and used as probes to analyze a collection of *P. syringae* strains isolated from diverse geographical locations. Strains were screened and evaluated for the presence of this potential forensic signature. In the present study, no obvious correlations between the EEL and the year or geographic place of strain origination were noted. EEL probes were amplified from conserved regions of the *P. syringae* genome, and were able to detect some strains within a pathovar, providing further evidence to support a role for the EEL in host specific interactions. The EEL is a variable region and is a potential signature that could be investigated further for diagnostic or forensic identification of *P. syringae*. Research and development on technologies for improved strain detection and typing are very valuable to the new field of Microbial Forensics, and will benefit society through better crop protection and improved disease control. Studies are underway to explore other regions of the *P. syringae* genome that may prove useful for strain typing and identification.

The Impact of Computer Mediated Communications on Stalking Severity: An Exploratory Analysis of Cyberstalking Field Data

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The interaction between disjunctive interpersonal relationships, those where the parties to the relationship disagree on the goals of the relationship, and the use of computer mediated communications channels is a relatively unexplored domain. Bargh (2002) suggests that CMC channels can amplify the development of

interpersonal relationships, and notes that the effect is not constant across communications activities. This proposal suggests a line of research that explores the interaction between computer mediated communications (CMC) and stalking, which is a common form of disjunctive relationships. Field data from cyberstalking cases will be used to look at the effects of CMC channels on stalking case severity, and exploring the relative impacts of CMC channel characteristics on such cases. To accomplish this, a ratio scaled measure of stalking case severity is proposed for use in exploring the relationship between case severity and CMC media characteristics, anonymity, and the prior relationship between the stalker and the victim. Expected results are identified, and follow-up research is proposed.

A Proposal to Study of the Emotional Effects of Presidential Transition on Presidential Assistants in Higher Education

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Presidents' tenure in higher education is a 'revolving door'. While presidents serve their institutions they have used presidential assistants as professional confidantes. When presidents leave the institution their assistants are remaining to serve the successor. No research to date examines the emotional impact of presidential transition on the presidential assistant.

The Child, the Playground, and Eggy-Peggy: A Play Language Remembered

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Presentation Subject Area: Humanities

According to Joel Sherzer, child or play languages are common phenomena among children, especially on school playgrounds. Some of these play languages are simple; others are complex. The play language I grew up speaking is quite complex and may have originated in Scarborough, England, in the 1950s. According to other researchers, Eggy-Peggy is a play language that English teenagers spoke and called Pidgin English. It is this play language that located itself to Kaneohe, Hawaii, during the 1960s, or perhaps earlier. The native language of most Kaneohe school children during the 1960s was Hawaii Creole English (HCE). When Eggy-Peggy emerged on the playground of Puohala Elementary School, many of my classmates and I spoke it and transferred HCE linguistic features to it. I suspect many like me learned Eggy-Peggy at home, either from caretakers or teenage siblings. This play language, I now call the code, truly emerged when in a language arts class around 1966, our teacher informed us that we had to stop spelling English words the British way and had to start spelling them the American way. Moreover, after researching the linguistic history of Eggy-Peggy, I found its underlying feature in an 1890s autobiography published in London. I also found evidence of the play language itself in a 1940s English novel and references of its use in news reports from Scarborough, England, in the 1950s. Thus, the questions raised in this research are historical ones: When did this play language locate itself to Kaneohe, Hawaii? In other words, when did this play language arrive in Kaneohe, Hawaii? Who might have brought it to the community? And, how long might it have been spoken there prior to the 1960s?

Conversion of Colloidal Ag Nanoparticles into Ionic Form through Electrophoresis

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Silver ions (Ag+) are converted electrophoretically at a controlled rate from colloidal solution in two stages. Pre-existing ions are first released to an adjoining cathodic chamber with the application of DC 300 V. The remaining silver nanoparticles are also moved to this chamber after they convert to additional silver ions. The ionic strength here reaches a peak at 0.9 hours. At this point, all silver in the anodic chamber, initially housing the colloidal solution, is depleted. Conductivity and UV-Vis spectra studies detail the system's activity. The arc discharge colloidal nanoparticle fabrication process maintains the particles in suspension without interference from conventional chemical surfactants, allowing for accurate interpretation of experiment results.

Factors contributing to malnutrition of rural adolescent girls from Tigray, Northern Ethiopia.

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Prevalence of malnutrition was assessed in 213 adolescent girls aged 10 to 19 in Tigray, Northern Ethiopia. The mean age, height-for-age (HAZ), weight-for-age (WAZ), body mass index (BMI), and BMI z-scores were 14 years, -1.45, -1.87, 15.7 and -2.20, respectively. More than 35% of the households reported girls did more work than boys. Most households (74%) reported food shortage during the summer. More than 80% of the households had no latrine and their source of water was river and/or unprotected wells (96%). No access to micronutrient supplementation or deworming was reported for adolescents; however, 98% had access to health facilities for illness and immunizations. Stunting and under weight were 26.3 and 44.1% respectively. On the basis of their BMI, younger adolescents were more undernourished than older adolescents ($p < 0.0001$). Reduction in number and quality of meals, and heavy involvement in works like laundry, cattle herding and long distance shopping were the main factors significantly associated with stunting. Differential treatment in food availability, reduction in the quality of meals and heavy workload were associated with both under weight in adolescent girls. Participatory community level interventions to address girls' workloads and gender role expectations, environmental sanitation, and household food shortages are recommended.(Supported by the Institute for Environmental Studies, Vrije Universiteit, Amsterdam, the Netherlands, Oklahoma State University, USA & Mekelle Universtiy, Ethiopia).

Fowlicidin-3 Is an α-Helical Cationic Host Defense Peptide with Potent Antibacterial and LPS-Neutralizing Activities

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Cathelicidins are an important family of cationic host defense peptides in vertebrates with both antimicrobial and immunomodulatory activities. Fowlicidins 1-2 are newly identified chicken cathelicidins with potent antibacterial activities. Here we report structural and functional characterization of the third chicken cathelicidin, namely fowlicidin-3, for exploration of its therapeutic potential. Nuclear magnetic resonance (NMR) spectroscopy revealed that fowlicidin-3 adopts a predominant α-helical structure with a slight kink near the center induced by glycine. Fowlicidin-3 is highly potent against a broad range of bacteria, including antibiotic-resistant strains, with minimum inhibitory concentrations in the range of 1-2 μM. Fowlicidin-3 kills bacteria quickly, permeabilizing cytoplasmic membranes immediately upon coming into contact with bacteria. Unlike many other host defense peptides, fowlicidin-3 retains bacteria killing efficiency in the presence of 50% serum or physiological concentrations of salt. Furthermore, fowlicidin-3 is capable of suppressing LPS-induced expression of proinflammatory genes in mouse macrophage RAW264.7 cells, with nearly complete blockage at 10 μM. Taken together, coupled with both potent bactericidal and LPS neutralizing activities, fowlicidin-3 appears to be an excellent candidate for future development as a novel antimicrobial and anti-sepsis agent, particularly against antibiotic-resistant pathogens.

Harmful or Harmless:The Effects of Television Usage on Societys Perception of the Black Population

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Presentation Subject Area: Social Sciences

Television is a powerful medium of communication. It acts as the prevailing source of entertainment and information for the public, and previous research suggests that television acts as a catalyst for the formation of stereotypes (Cullingford, 2000). As a minority population, African Americans have been targets of stereotypical portrayals. Characterizations centered on racist beliefs about African Americans have been prevalent on stage and in television.

Numerous modern sitcoms seem to contain implicit stereotypes of black people. When it comes to the African American family, television tends to portray the black family in a debasing light (Berry, 1998) and suggests dysfunction and instability. African-American characters' mannerisms are also often centered-around buffoonery and senseless behavior (Hammer, 1992). Previous research has shown that television significantly effects the perception of African-Americans and negative stereotypes have emerged as a result of watching black entertainment television (Fujioka, 1999; Ford, 1997).

Cultivation analysis research investigates how exposure to television affects perceptions of social reality. It hypothesizes that heavy and light television viewers demonstrate differences in belief based on their viewing habits (Morgan & Signorielli, 1990). Heavy viewers are hypothesized to have beliefs that more closely

reflect the reality presented to them on television. Personal experience, however, is believed to moderate the relationship between television viewing and beliefs.

Contact plays a fundamental role in how people form opinions of others (Entman & Rojecki, 2000). Individuals with personal experience of a particular phenomenon tend to be less influenced by television portrayals of the phenomenon. Taking this into account, more experience (direct contact) with African-Americans offsets the influence of negative television portrayals.

Based on the above research, the following hypotheses were derived:

H1: Heavy television viewers, particularly those who watch sitcoms with African-American characters, will see the African-American family as more dysfunctional than light television viewers after controlling for their level of direct contact with African Americans.

H2: Heavy television viewers, particularly those who watch sitcoms with African-American characters, will see the African-American population as more irrational, irresponsible, and immature than light television viewers after controlling for their level of direct contact with African Americans.

A survey design was used which measured sitcoms, family structure, family functioning (dysfunction), and irresponsibility. Correlational analysis will be used to measure the strength of relationship between viewing sitcoms, direct contact, and stereotypes.

Dried plum polyphenols stimulate osteoblast activity and attenuate TNF-α-induced detrimental effects on osteoblastic function in MC3T3-E1 cells.

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Previous studies demonstrate that dietary supplementation with dried plum has positive effects on bone mass and structure, and significantly increases indices of bone formation such as ALP and IGF-I. Our most recent data show that dried plum has comparable effects to PTH, a potent bone anabolic agent. Potential bioactive components in dried plum responsible for these anabolic effects are its polyphenols that maintain potent antioxidative and anti-inflammatory properties. Inflammatory mediator such as tumor necrosis factor (TNF)-α, the main cytokine in the pathogenesis of bone loss, has been known to disrupt osteoblast development, function and signaling. The purpose of this study was to determine the extent to which dried plum polyphenols influence osteoblast activity and mineralized nodule formation using the MC3T3-E1 murine pre-osteoblast cell line. Cells were plated and incubated in α-MEM with 5% FBS and 1% P/S and then supplemented with 25ug/ml ascorbic acid and 10mM β-glycerophosphate beginning at 48hrs. Cells were then pretreated with polyphenols (2.5ug/ml, 5ug/ml, 10ug/ml, 20ug/ml) extracted from dried plums and 24hrs later stimulated with TNF-α or control medium. Cell medium was changed every 3 days and intracellular alkaline phosphatase (ALP) activity was measured at 7 and 14 days and mineralized nodule

formation assessed at 18days. Dried plum polyphenols at 5, 10 and 20ug/ml significantly increased intracellular ALP activity by 40% under normal conditions. Polyphenols also prevented TNF-α -induced suppression of ALP activity at 14 days ($p<0.001$). Dried plum polyphenol extracts increased mineralized nodule formation as evidenced by an increase (by 27.7 %) in density of Alizarin red S staining. We concluded that dried plum polyphenols effectively enhanced the osteoblast differentiation and activity under normal and inflammatory conditions. Future experiments will focus on the mechanisms by which these polyphenols mediate these effects on osteoblast activity and the transcriptional regulation of osteoblast differentiation.

Influence of dietary manipulation on DM, N, and P excretion of lactating sows.

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A total of 58 Yorkshire and Yorkshire x Landrace sows (180 kg BW, parity = 1.3) was used during three different lactation periods to determine the effects of reducing dietary CP and P on sow performance and DM, N, and P excretion. Sows were blocked by parity, wt, and breed, and placed into one of two identical, environmentally-controlled, barns with each having a shallow pit, pull-plug drainage system. Each barn was randomly allotted to one of two dietary treatments. The control diet consisted of a fortified corn and soybean meal based diet formulated to 18.5% CP and 0.60% P. The experimental diet (LPP) was similar to the control diet with the exceptions of a 0.50% unit reduction in CP with 0.05% lysine HCL added, and a 0.10% unit reduction in P with the inclusion of 350 phytase units. Both diets were formulated on a true digestible Lysine basis (0.88%). Sows were weighed upon entry into the farrowing house and at weaning. Also, litter weights and weaning weights were recorded to evaluate sow performance. All feed and water intake was recorded weekly. Pit volume, pH, and electroconductivity were measured weekly prior to pit sampling and draining. The pits were refilled with water at the beginning of each week and the beginning volume was measured. Feed and pit samples were collected for DM, N, and P analysis. There were no differences ($P > 0.10$) in pH and electroconductivity of the slurry for sows fed the two diets. Also, no differences ($P > 0.10$) in sow weight change, number born alive, number weaned, litter weight, ADFI, or DM, N, and P intake were noted between treatments. Daily DM excreted (g/d/sow) was similar ($P > 0.10$) between treatments, but daily N excretion was reduced ($P < 0.05$) for sows fed the LPP diet. Likewise, daily P excretion tended to be reduced ($P < 0.10$) with the LPP diet. Based on these results, the LPP diet did not affect sow performance, intake, or daily DM excretion. However, the results of this study suggest that feeding an LPP diet to lactating sows can reduce daily N and P excretion.

Key words: Lactating sow, Nutrient excretion, Diet

Effects of an intratracheal Mannheimia hemolytica challenge on intake, blood flow and splanchnic metabolism of amino acids in fed and fasted steers

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Bovine Respiratory Disease (BRD) is the most common disease in stocker and feedlot cattle. Although emphasis has been placed on strategies to prevent, diagnose and/or treat BRD, rates of morbidity and mortality have increased. The objective of this experiment was to evaluate blood flow and net splanchnic amino acid flux during a BRD challenge. Twenty two steers (initial BW = 320 ± 24 kg) with chronic indwelling catheters to measure blood flow and net nutrient flux across the portal drained viscera (PDV) and liver were used for this experiment. During two periods, steers were assigned to one of four treatments: 1) fed ad libitum and not challenged (Fed/Control); 2) fed ad libitum and challenged (d 0) with $1x10^9$ CFU/mL of *Mannheimia hemolytica* via a tracheal tube (Fed/Challenge); 3) fasted for 72 h and not challenged (Fasted/Control); 4) fasted for 72 h and challenged (d 0) with $1x10^9$ CFU/mL of *M. hemolytica* via a tracheal tube (Fasted/Challenge). Dry matter intake and total urine and fecal excretion were collected for N balance. Statistical analysis was performed for repeated measures using a first-order autoregressive correlation structure for all variables. For DMI, a diet*disease*day interaction was observed ($P = 0.02$). For the first 48 h after challenge, Fed/Control steers had greater ($P < 0.05$) DMI than Fed/Challenge and Fasted treatments. Following realimentation, there was no difference in DMI between the Fed/Control, Fasted/Control, and Fasted/Challenge groups, which had greater ($P < 0.05$) DMI than the Fed/Challenge steers. On day 5 the Fasted/Challenge steers had lower ($P < 0.05$) DMI compared with remaining treatment groups. Diet affected ($P < 0.05$) portal, hepatic, and arterial blood flow, which were greater in Fed (460.9, 708.4, and 170.3 L/h, respectively) compared with Fasted (426.7, 522.1, and 97.2 L/h, respectively) steers. Haptoglobin responded with a diet*disease interaction ($P = 0.004$). Fasting alone caused an increase in arterial haptoglobin concentration, although the increase was greater in Fasted/Challenged steers than Fasted/Control steers. Arterial concentration of total amino acids (TAA) was greater ($P = 0.01$; 1,966 vs. 1,645 μM) in Control than in Challenged steers. In addition, there was a net removal of TAA (-117.8 mmol/h) by the liver for Challenged steers and a net release for Control steers (21.48 mmol/h; $P = 0.03$). Although there was no difference ($P = 0.22$) in arterial concentration of essential AA (EAA), there was a tendency ($P = 0.11$) for a greater net removal (-65.2 vs. -22.3 mmol/h) of EAA by the liver for the Challenge vs. Control steers. Arterial concentration of nonessential amino acids (NEAA) was greater ($P = 0.001$) for the Control group (1,173 vs. 924 μM). Similar to TAA, there was a net removal of NEAA (-52.8 mmol/h) by the liver for Challenged steers and a net release for Control steers (42.5 mmol/L; $P = 0.02$). Based on these results and negative N balance in steers challenged with *M. hemolytica*, it appears that BRD results in greater removal of amino acids by the liver in support of an acute phase response.

Shoreline Septic System Impact on Water Quality of Grand Lake Reservoir

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Presentation Subject Area: Environmental Sciences

Grand Lake is an 18,616hectare reservoir located in north-eastern Oklahoma. A large number of both seasonal and permanent dwellings exist around the shoreline of the lake, with some of these areas still serviced by private sewage treatment systems (septic systems). As septic systems age, they have the potential to fail which could lead to the input of nutrients, bacteria and pathogens to the lake. The objective of this study is to identify sites around Grand Lake that may be sources of septic input and to use a suite of water quality parameters to determine if septic leachate is entering the system near these sites. County records will be evaluated in order to classify shoreline septic systems by age and failing systems will be detected using a helicopter mounted Infermetrics 445G MKII FLIR (Forward Looking Infrared Imaging) system. Water quality parameters evaluated include nutrients, dissolved oxygen, pH, temperature, conductivity, and total/fecal coliform on a monthly basis. Preliminary data using the detergent assay have successfully indicated septic input into the lake.

Loving a Rainbow of Personalities

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Presentation Subject Area: Social Sciences

In this study the relationships between love styles and personality types was investigated. Personality and loving styles are related in the sense that they have substantial influence on one another. Love styles refer to how individuals define and approach their attitudes regarding love. Personality types refer to the active process within each person's heart and mind that dictates how he or she feels, thinks, and behaves. Twenty-seven college students from a middle-sized university in the Midwest volunteered to participate. A survey was given asking basic demographic questions that included age, sex, race, whether they were in a romantic relationship, and if they were, how long. The participants were given two questionnaires: the Hendrick and Hendrick Love Attitudes Scale, which defines love by six distinct types (eros, ludus, storge, pragma, mania, and agape) and the Hartman Personality Profile, which characterizes personality by colors. Of the 27 participants, 25.9% showed traits of eros love, 11.1% showed traits of ludus love, 40.1% showed storge love traits, 11.1% showed pragma love traits. None of the participants showed traits of mania love and 11.1% showed agape love. Reds showed traits of all except mania love, blues love traits were mostly storge and eros, followed by pragma and agape, whites showed traits of mostly ludus and agape love, and yellows showed mostly storge love traits. These results did not support the following two hypotheses: Reds will mostly show traits of mania love and Blues will mostly show traits of pragma love.

Planning Model for Rural Water Systems How to Optimally Meet Future Drinking Water Demands in Northeastern Oklahoma

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Rural water districts adjacent to growing urban areas in Northeastern part of Oklahoma, in Wagoner and Rogers Counties, will experience challenges in the future concerning their optimal management of their water supplies, treatment as well as the optimal rate of construction of new distribution systems. These rural water districts will experience increased drinking water demands and changing demand profiles due to urban/rural interface. The population is estimated to increase 50 percent by 2060 in parts of the counties included in the study that are closest to the urban areas. The aging infrastructure of many rural water districts and more stringent water quality standards will put pressure on these rural water systems to minimize the cost of providing an adequate and affordable water supply to end-users.

Rural water districts possess unique features in providing water to their customers. The long tradition of rural water districts of providing water to primarily rural customers is changing due to increasing population growth due to actual population growth, annexation, and housing developments in the adjacent rural service areas. Also, each rural water district is unique in how and where it gets its water.

This project develops a decision support system (DSS) to address how to optimally (least cost) meet the increasing demands of drinking water and thus the anticipated infrastructural needs of rural water systems. The term DSS has become a common phrase used to describe multiple software products and systems that are linked together. The DSS structure of this project incorporates a user interface, simulation models and an optimization model. The user interface includes multiple data entries including identification of the fastest growing areas and the projections of future drinking water demands based on population growth, land-use profiles, population densities, and availabilities of sources of water. The simulation models include the use of ArcView GIS and WaterCAD to incorporate water system infrastructure and service areas, cost estimates for energy, storage, transmission, distribution, treatment and construction. Future anticipated growth scenarios will be simulated. The output of the simulation is utilized to create an optimization model: Minimization of total costs plus energy costs subject to meeting hydraulic constraints, fulfilling the water demands, and satisfying pressure requirements. The optimization is applied to two different scenarios under increased drinking water demands: Individual vs. cooperative solutions. The individual solution will determine the projected feasibility and cost of meeting the demands if each rural water district acts alone, and the cooperative solution will determine the potential cost savings from centralized treatment plants. The DSS framework is applied to five rural water districts in Wagoner and Rogers Counties. The DSS can be applied to other systems and will benefit water use planners and rural and municipal water system managers.

Knockdown of flotillin(s): Implications on surfactant secretion by alveolar type II cells.

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Lipid rafts are the membrane microdomains enriched in cholesterol, sphingomyelin and also some saturated lipids. These microdomains sequester only some specific groups of proteins involved in diverse cellular

functions. Alveolar type 2 (AT2) cells are the prominent epithelial cells lining the lung alveolar lumen. AT2 cells synthesize, store and secrete surface active lipid rich substance called surfactant. We have hypothesized that lipid rafts might be crucial for surfactant secretion. Our preliminary studies indicated that AT2 cells expressed flotillin(s), the lipid raft marker proteins. Additionally, lipid rafts isolated from AT2 cells indicated the presence of as Soluble N-ethylmaleimide-sensitive factor attachment protein receptors (SNARE), the main proteins involved in surfactant secretion. Lipid raft disruption by cholesterol depletion reduced the association of SNARE proteins and also severely inhibited surfactant secretion. We, in this study have further investigated the role of flotillins in the formation of lipid rafts and their subsequent effect on surfactant secretion. To this end, we have silenced the expression of flotillins using RNA interference technique. Our results indicated that efficient knock down was possible with this technique. Flotillin-2 knockdown had resulted in reduced surfactant secretion, however, the SNARE protein association with lipid rafts was unaffected. In summary, we conclude that flotillins might alter other processes such as cytoskeletal rearrangement, signal transduction pathways or second messengers, and lamellar body maturation which are also crucial for surfactant secretion. Further studies need to be undertaken to arrive at a definite conclusion.

The Schmidt Mesoamerican Collection: A Material Culture Study

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Presentation Subject Area: Social Sciences

Fred Schmidt donated more than three hundred artifacts from his Mesoamerican Collection to Central Missouri State University's museum in 1998. The artifacts were catalogued as originating from the Olmec culture (100-900 AD) and safely stored away. Central's museum had not had a chance to examine fully or display the gifts, the importance of the artifacts was researched through a material culture study. A material culture study asks the who, what, when, where, why, and how about an artifact and its manufacture. Since many past societies do not have written historical accounts, artifacts are the only way to learn of that culture. Five artifacts (a jadeite figurine, two hachas, a mask and a maskette) were chosen from the collection to study using Fleming's model for a material culture study. This model uses a four-step process for identification, evaluation, cultural analysis, and interpretation of artifacts. Within this model the history, materials, construction, design, and function of each artifact was explored. The use of Fleming's process resulted in the reclassification of two hachas that were catalogued incorrectly. These artifacts were not Olmec, but originated in the later Totonac culture. Although each culture resided in the same area of present-day Mexico, the Olmec dated much earlier then the Totonac. The final result will be an exhibited with a written description of the artifacts within the museum at Central Missouri State University. In doing so, the Central community will gain an appreciation of the diversity of cultural artifacts at Central's museum.

The Role of Managerial Performance on Commitment and Satisfaction:A Social Exchange and Expectancy Perspective

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Presentation Subject Area: Social Sciences

Job performance has been studied in detail across many different disciplines including marketing, management, and psychology. While most research has focused on salespeople, the author examines performance from a managerial perspective. In this paper, the author proposes a model to study the relationship among performance, satisfaction, commitment, and willingness to participate from a new product view to answer the following research question: How does overall new product performance and perceived managerial performance affect commitment to the company, job satisfaction, and willingness to participate in the next new product/project offering?

Does Education Affect Attitudes Towards Abortion?

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The purpose of this research was to examine whether education influences a person's attitude towards abortion. This study focused solely on education as an influential factor because education differs in context from other influential factors, such as religion. The researcher surveyed 30 male and 69 female (N=99) undergraduate students at a Midwestern university. Education was measured using the ordinal rankings of freshmen, sophomore, junior, and senior commonly used in college classification. The researcher administered a 19-item survey, modified from Parson's (1990) Reasoning About Abortion Questionnaire (RAQ), consisting of statements coded as either pro-choice or pro-life. A One-way ANOVA was run for statistical analysis. Due to the large error rate and small sample size, statistical analysis reflected no significance between the variable groups. The findings of this study did not support the hypothesis that education would significantly affect an individual's attitudes towards abortion. There were many limitations to the study and the researcher believes with a larger sample size, differences among groups may have been significantly different. Further research in this area with groups of drastically different educational levels is encouraged.

Popular Culture Engages Reluctant Adult Readers in the Developmental Classroom and Raises Self-Esteem and Motivation in Learning.

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Popular culture in the adult developmental classroom is the focus of this teacher action research project. In a world where visual stimulation and media saturation is a constant, I question whether popular culture will engage otherwise reluctant readers. This research focuses on adult remediation students, ages 18 to 64, at a

two year technical degree granting institution. The types of data I collect from my classroom include student work, student reflections, impromptu interviews, questionnaires, surveys, and student and instructor journals. Upon coding, analyzing, and interpreting the data, results support a rise in the self-esteem, motivation, and engagement of adult students when popular culture is integrated into the developmental reading curriculum. In addition to the qualitative data retrieved from the classroom, the quantitative data from the college shows that pass rates for the developmental reading course improved from 40% to 70%. The second semester retention rates for adult developmental reading students improved by 30%.

It's All About Kids: Preventing Overweight in Elementary School Children in Tulsa, Oklahoma

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Presentation Subject Area: Biomedical Sciences

In response to the childhood obesity epidemic, a school-based program, It's All About Kids, was designed by the Tulsa Health Department, Tulsa Public Schools, and community partners to change food choices and increase physical activity levels of students in the Tulsa Public Schools, grades 1 through 5. Eighteen Title I schools participated in this eight-pronged intervention including Nutrition & Healthy Eating, Physical Education, Health Services, Child Development Services, Health Education, Parental Participation, School Personnel Involvement, and Ancillary Services. The nutrition component consisted of 6 weekly 30 minute experiential classroom lessons including healthy eating food games, taste-testing, whole grain bread baking, snack attack, portion distortion, and food demonstrations. The physical activity component, incorporated into Physical Education classes, emphasized aerobic capacity, muscle strength, and endurance. The program was evaluated using validated knowledge, attitude and behavior questionnaires, a food checklist, and the Coopers FitnessGram' and data was analyzed using Statistical Package for the Social Sciences, SPSS. Documenting interventions and evaluating programs is critical to setting evidence-based health policy and justifying funding and broader implementation of successful interventions.

A Comparison of Inter-generational Profiles for Desired Benefits by Hotel Employees as a part of Human Resource Strategic Planning

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Presentation Subject Area: Social Sciences

The hotel industry with its ease of entry for low- and non-skilled employees has long had a highly diverse employee population. The make-up of today's organizations is comprised of a variety of races, genders, sexual orientations, national cultures, and ages.

Of more recent interest and focus is the notion of age diversity that is reflected in multi-generational or inter-generational work groups. Today's hotel employees represent four distinctly different generations: Traditionalists, Baby Boomers, Generation X'er, and the NeXters. As with other types of diversity, multi-

generations provide many opportunities and challenges for human resources practitioners in the lodging industry.

While diversity in the workplace has been studied widely over the past decade, little empirical research has been done in regards to generational diversity and the impact it is having on organizations and their strategic human resource management. Human Resources practitioners in hotels are challenged with developing and administering benefit packages and which meet the needs and desires of the multi-generational workforce.

The aim of this study is to provide a basis for lodging human resource practitioners to make more effective strategic decisions related to the design of benefit packages used to attract, motivate, and retain employees who represent a multi-generational workforce. The specific objectives of this study are to (1) from the perspective of full-time, full-service hotel employees, identify important common benefit package components, (2) identify preferred benefit profiles based on generational segments of the employees, (3) determine if there are differences among generational segments of employees towards benefit profiles, and (4) provide an empirical basis for making recommendations for developing benefits packages based on the mix of employees within a full-service properties.

This study is a two-phased research design. The first phase is comprised of a survey of full-time hotel workers to determine the most commonly desired types of benefits. Factorial analysis will be applied to identify the most commonly desired categories of benefit options. The second-phase of the research uses a questionnaire designed to identify specific attributes for each benefit options. Conjoint analysis will be applied to determine the preferred profile of benefits for each generational cohort.

The population for this study is full-time employees working in full-service lodging properties. A convenience sample of full-time workers with one year or more of service at a large, full-service, resort will be used to collect data for the study.

This study provides three unique contributions to the field of hospitality research. First, the study adds to the depth of research in generational diversity in the workplace by focusing specifically on full-service hotels. Second, the research will generate specific knowledge for developing benefits packages customized to meet generational needs. Third, the study provides strategies for practical application within human resource departments and divisions.

Characterization of Porcine Tissue Kallikreins: Towards Understanding the Biology of a complex family of genes

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Kallikreins belong to a family of serine proteases that are widespread throughout living organisms, expressed in diverse tissue specific pattern, and known to have highly diverse physiological functions. The 15 human and 24 mouse kallikreins have been implicated in patho-physiology of brain, kidney respiratory

and reproductive systems, and often are used as cancer biomarkers. To better understand the structure and evolutionary origin of this important gene family in the pig, we have constructed a fully contiguous BAC clone-derived physical map of the porcine kallikrein gene region and have fully sequenced a BAC clone containing 13 kallikrein genes, 11 of which are novel. Radiation-hybrid mapping assigns this kallikrein gene-rich region to porcine chromosome 6. RT-PCR based expression analysis of porcine kallikreins showed a complex expression pattern across different tissues with the thymus being the only tissue expressing all 13 kallikreins genes. We have also conducted quantitative real-time PCR based, expression analysis and insitu hybridization studies of porcine kallikreins to evaluate the expression and tissue localization of kallikreins in the porcine endometrium during the estrous cycle and pregnancy to better understand the role of kallikreins in placental development and embryonic survival in the pig.

Characterization of Porcine Tissue Kallikreins: Towards Understanding the Biology of a Complex Family of Genes During Early Embryonic Development

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Many of the endometrial responses that occur during conceptus development and establishment of pregnancy in the pig resembles the acute-phase responses induced during tissue inflammation. Following the rapid trophoblastic elongation on day 12, an increase in tissue kallikrein activity and bradykinin release occurs, suggesting that the kallikrein-kininogen-kinin system is active in the pig. The present study investigated the isolation characterization and endometrial expression and presence of porcine tissue kallikrein 1, 4, 9 and 14. A fully contiguous BAC clone-derived physical map of the porcine kallikrein gene region was sequenced to identify 13 kallikrein genes in the pig, among which 11 were novel kallikrein genes. The endometrial and conceptus tissue kallikrein gene expression of these kallikreins were evaluated using RT-PCR and qRT-PCR. Kallikrein 1 gene expression was similar across the estrous cycle and early pregnancy. Whereas, kallikrein 4 expression was higher in cyclic gilts compared to pregnant gilts. Kallikrein 9 expression detected two alternative transcripts of the gene, where the long form was only expressed in days 15 and 18 of pregnancy. The expression of Kallikrein 14 gene expression was not detected in days 5 and 10 of cyclic endometrium and day 5 of pregnant endometrium, but was clearly present on days 12, 15, and 18 of the estrous cycle and pregnancy. The presence of multiple tissue kallikreins during early embryonic development in the pig suggests that uterine tissue kallikreins may initiate many biological processors during early conceptus attachment and survival such as alteration of the extracellular matrix, embryo implantation and degradation of IGFBP within the porcine uterus.

Produced water contamination of groundwater at Skiatook Lake, Oklahoma

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Presentation Subject Area: Environmental Sciences

Produced water, which often has elevated levels of dissolved salts and soluble hydrocarbons, is a byproduct of petroleum production. This study investigated potential biological effects of produced water contamination derived from occasional surface overflow and possible subsurface intrusion along the shore of Skiatook Lake, Oklahoma. We monitored basic chemistry and acute toxicity to Daphnia pulex in water samples from shallow wells near a produced water evaporation pond and injection well. Initial results suggest that both the produced water and shallow groundwater are toxic to D. pulex. Shallow ground water exhibited LC50s ranging from 3.9% near the injection well to greater than 100% elsewhere at the impact site. Groundwater contamination was greatest near produced water sources but decreased with distance, though significant effects were evident in waters collected within the lake conservation pool.

The Mediating Role of Humor Styles in the Relationship Between Shyness and Loneliness

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The main purpose of the current study was to investigate the mediating role of humor styles in the relationship between shyness and loneliness. An added purpose was to examine the correlational relationship between social competence and humor styles. Participants completed self-report measures including the Humor Styles Questionnaire (HSQ), the UCLA Loneliness Scale Version 3, a shortened version of the Texas Social Behavior Inventory (TSBI), and the Revised Cheek and Buss Shyness Scale. To test for mediation, multiple regression analyses were performed and results show that specific humor styles do mediate the relationship between shyness and loneliness. Mediation occurred via Affiliative and Self-defeating humor styles. Shy individuals who scored high on the Self-defeating humor scale were predisposed to higher loneliness scores, and shy individuals who scored low on the Affiliative humor scale were predisposed to higher loneliness scores. Examination of the correlation between social competence and humor styles yielded expected results. Significant positive relationships were found between social competence and both Affiliative and Self-enhancing humor styles, and a significant negative relationship was found between social competence and Self-defeating humor. The correlation between social competence and Aggressive humor style was not significant.

Note Worthy: The Geography of Smooth Jazz

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Presentation Subject Area: Social Sciences

This paper explores the geography of contemporary jazz, a subgenre that coalesced out of a variety of musical influences in 1980s coastal California and has long been associated with this region serving as its core. Much research in the subdiscipline of music geography to date is based on song lyrics, and since smooth jazz is primarily an instrumental form, this paper fulfills two purposes, examining alternative approaches to studying music geography and exploring a musical style that has not yet received scholarly attention.

Measuring the Effect of Functionality Parameters on Hard Red Winter Wheat Prices

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Presentation Subject Area: Social Sciences

There is increasing evidence that the marketing system for hard red winter (HRW) wheat is not efficient in pricing quality differences. Current prices do not reflect superior wheat quality characteristics; pricing system mainly focuses on the physical characteristics and partially reflects the preferences of both milling and baking companies. Milling companies show preference for having information about the attributes that will influence their productivity when converting wheat into flour. Little research has been conducted on the effect of characteristics related with end-use attributes over wheat prices. The purpose of this paper is to estimate the implicit value of quality attributes both physical and end-use for hard red winter wheat in the producing regions of Oklahoma, Kansas, Nebraska, and Colorado. A secondary objective will be to determine whether information related with end-use quality attributes have any impact over prices. We include in the model physical characteristics such as test weight, moisture, protein content, dockage, end-use quality parameters such as farinograph stability, farinograph water absorption, alveograph P/L ratio, and alveograph W value, and flour yield extraction.

To estimate the implicit value of wheat quality characteristics we will use a hedonic pricing model. We will use the mixed procedure of SAS Inc. to estimate the parameters. We will use the maximum likelihood as the estimation procedure because it produces robust estimates when error terms are suspected of being heteroskedastic. Month and locations will be the categorical independent variables or classification variables because observations vary with respect and within months and locations. To test for heteroskedascity we will conduct the Breusch-Pagan test. To test for normality of the error terms we will conduct the Shapiro-Wilk test.

We expect that wheat quality characteristics related with end-use have an effect on local cash prices in the growing regions of Oklahoma, Kansas, Texas, Nebraska, and Colorado for the period 2005-2006, which would imply that information regarding these quality parameters add some value to milling companies. However, it is probable that prices might not reflect quality differences implying that the market is still inefficient despite the availability of the information. It is also probable that the market's reaction is in transition and this process might take more time, consequently we may require a longer time period than the one considered. Nonetheless, results from this study should provide insight into the efforts being made by

wheat marketing agencies and producer associations to promote quality-based marketing of wheat to domestic and foreign millers.

Cradle to Cradle knitwear Production and Consumers Evaluation

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Presentation Subject Area: Environmental Sciences

The apparel industry is a major contributor to environmental problems from textile material manufacturing through production to landfills replete with synthetic fabrics. In the age of mass production, designers can play a critical role in reducing environmental problems. However, current apparel design and production models focus on function, aesthetic and economic, and no model puts apparel designers' role in environmental sustainability into consideration. The purpose of this study is to develop and implement a new apparel design and production model that allows apparel industry to consider environmental sustainability in their work.

McDonough and Braungart's 'cradle to cradle' (C2C) model provides designers with a new way to design and eliminate many environmental problems (McDonough & Braungart, 2002). In C2C, every material will be either 'biological nutrient' that will easily reenter the nature without depositing toxins, or 'technical nutrient' that will continuously circulate as valuable materials within 'closed-loop' industrial cycles. The new model integrates C2C with existing apparel design and production models (LaBat & Sokolowski, 1999; Plumlee & Little, 1998) to provide sustainable apparel production guidelines.

Knitwear design and production was used to implement C2CAD as a proof-of-concept. Following C2CAD model, we designed and produced children's knitwear products using 100% organic cotton, a biological nutrient. The design of our knitwear products has 8 colors, which were produced by 5 natural dyes and 3 synthetic dyes. The 3 synthetic dyes were evaluated for chemical safety to meet the requirement for biological nutrients. The products meet the aesthetic and functional requirements for children's knitwear and are safe for human and environmental health in manufacturing, use and disposal. After children' C2C knitwear were produced, they were displayed and discussed with focus groups. Focus groups evaluated the C2C knitwear for design, color combination, tactile sensation and willingness to purchase with suggested price. The focus group data collection is in progress.

Using C2CAD, apparel designers select materials based on their inherent human and environmental health and safety. Therefore, employees' occupational safety will be improved. With no harmful wastes released from manufacturing, manufacturer and local community will save a lot of money in pollution treatment. With materials designed to cycle safely at the end of the products' life, C2CAD helps diminish resource consumption in the apparel industry.

The Impact of Downsizing on Newsroom Diversity

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Presentation Subject Area: Minority Issues

The face of American is rapidly changing. In a few years, people of color will represent both 50 percent of the population and a majority of the nation\s news audience. It is imperative that journalists of color be integrated into the press corps in order to make an impact on today\s news coverage. However, an economic downturn, which began in 2001, has caused newsrooms all over the country to have to shrink their staffs. This paper will explore the decline in diversification of the news media industry as a result of downsizing as well as the distribution of minorities in the field.

The Relationship Among Reason-Giving, Experiential Avoidance, and Levels of Depression

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Presentation Subject Area: Social Sciences

This study examined the relationships among the reasons a person offers for depression, levels of experiential avoidance, and the levels of self-reported depression as measured by the Reasons for Depression questionnaire (RFD), the Acceptance and Action Questionnaire (AAQ), and the Beck Depression Inventory (BDI), respectively. Undergraduate students (N=116) from a Midwestern university completed a self-report battery composed of those three questionnaires. The first hypothesis that both the RFD and the AAQ would be positively correlated with the BDI was supported. However, the relationship between the AAQ and BDI was not found to be solely accounted for by the RFD, as a multiple regression analysis indicated that both the RFD and the AAQ independently significantly predicted levels of depression. The third hypothesis, which was also supported, predicted that RFD total and subscales scores would be correlated with the AAQ. Implications of the findings for treatment of depression, comparisons to previous research, and suggestions for further research are discussed.

Measurement of Temperature in Biological tissue during cancer treatment

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Presentation Subject Area: Biomedical Sciences

The ideal cancer treatment modality should not only cause primary tumor supression but also induce an antitumor immunity. A combination therapy using a laser, a laser-absorbing dye and an immunoadjuvant guided by temperature measurement probes such as magnetic resonance imaging thermometry (MRT) and infrared thermography (IRT)can be an ideal modality.MRT has been applied to measure 3D temperature measurement and IRT has been applied to measure skin temperature of biological tissues. Irradiation of 805-nm laser on tissue rises tissue temperature due to enhanced photon absorption. Monte Carlo simulation of photon transfer in complex medium and Finite Difference method to solve heat diffusion equation has been

performed for the measurement of both volume and surface temperature distribution. In this paper, the primary results of simulation and in vivo experimental studies are presented and discussed.

Crayfish Distribution in Southwestern Oregon: Displacement of Native by Introduced Species.

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Presentation Subject Area: Biological Sciences

Invasive non-native species are a major threat to aquatic ecosystems. In this study, we determined the distribution of native signal crayfish (Pacifastacus leniusculus) and the invasive ringed crayfish (Orconectes neglectus neglectus) in Bear Creek to reveal whether O. neglectus is displacing or coexisting with P.leniusculus. Bear Creek is a major tributary of the Rogue River in southwestern Oregon. We sampled Bear Creek drainage at 35 sites using baited and un-baited traps, including 5 mainstem sites and 30 sites in 14 different tributaries. O. neglectus were trapped at a total of 19 (54%) sites. O. neglectus was caught at 4 (80%) mainstem sites and 15 (50%) of tributary sites. P.leniusculus distribution is extremely limited in the Bear Creek drainage. Of the 35 sites, native crayfish were trapped at only 3 (9%) sites; at the upper most mainstem site and two upper tributary sites. The upper mianstem site of Bear Creek was the only site that both species were caught in the same location. O.neglectus were trapped at 3 times higher densities than P.leniusculus. Unbaited traps caught higher rates of O.neglectus than baited traps caught P.leniusculus. Our data suggests that O.neglectus are migrating to the upper portions and within a matter of years could completely displace P.leniusculus in the Bear Creek Drainage. O.neglectus are likely having a major affect on the ecosystem by competing with and consuming native plants, invertebrates, and fish, while potentially diminishing water quality.

A Comparison of the Propensity to Cheat Among College Students Majoring in Accounting, Business, and Non-business

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Presentation Subject Area: Social Sciences

Academic dishonesty has become an increasingly serious epidemic in American Post-secondary education during the past decade. The purpose of this research was to determine if college students majoring in Accounting, Business, and Non-business would differ in their perceptions of what constitutes cheating, what justifies cheating behavior, and their personal participation in cheating. The researcher hypothesized that students majoring in Accounting would be the most ethical group of students. The researcher used a 5-point Likert scale to survey a non-random convenience sample of 187 undergraduate college students from a metropolitan university located in the Midwest. Independent T-test, Frequencies, and Means were used to analyze the results. The results of the study indicated that Business majors had a more defined definition of cheating than did other students and that they strongly disagreed to justified cheating. There were also more differences found between Business and Non-business majors than between Accounting and Non-business majors.

Development of microarray hybridization for detection of known & related novel plant viruses in natural settings.

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Presentation Subject Area: Biological Sciences

The International Committee on Taxonomy of Viruses recognizes only about 2000 viral species in the world, a number which is undoubtedly an underestimate. The possibility of future emergence of unknown viruses as crop pathogens requires an active search for novel viruses. This study aims at developing microarray hybridization, a rapid method for detection and characterization of known & related novel plant viruses, irrespective of their pathological behaviors. In this approach, target nucleic acids extracted from plant samples are amplified using random primers; the products, tagged with fluorescent dye are hybridized to a microarray of more than a thousand oligodeoxynucleotide probes. The probes were designed for each genus (sometimes subgenus) of plant or fungal viruses from the NCBI reference genomes of those viruses. Preliminary experiments using full length cDNA control targets (2000-5000bp) and short probes (20-30mer) failed to produce sufficient intensity of hybridization. In this study, I examined the effects of target and probe lengths on hybridization. Experiments using different target lengths showed that smaller targets (125-150bp) hybridize much more strongly than longer targets (300bp and above), possibly due to secondary structure formation in longer targets. When probe length was varied (20, 30, 50 & 70mers) an increase in hybridization intensities from 20mer to 70mer occurred. Initial control experiments in which T tails (T20) were attached to shorter probes (20-30mer) at their 3'ends and using shorter targets (125-150bp) showed as strong hybridizations as with longer probes (70mers). The T-tails are believed to facilitate the UV cross linking of the probe to the chip making the rest of probe sequence accessible for the target. The use of T tails was adopted to avoid the decrease in selection potential of detection due to longer probes. Thus, microarrays using tailed probes and shorter length targets will soon contribute to the discovery of novel viruses, assuring homeland security and predicting outbreaks of agricultural diseases.

A Comparative Study of Indoor Air Quality at Offices Where There Are Machines That Discharge Volatile Organic Compounds

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Measurement of Exhaled Nitric Oxide and Exhaled Carbon Dioxide in the Breath of Newly Received Steers

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Tunable-diode laser absorption spectroscopy (TDLAS) was used to measure exhaled nitric oxide (eNO) and exhaled carbon dioxide (eCO_2) in clinically healthy steers and steers exhibiting clinical signs of bovine respiratory disease (BRD) on arrival and throughout a 42-day receiving period. Approximately 1 hour after arrival, exhaled breath was collected for measurement of eNO and eCO_2 using TDLAS (Ekips Breathmeter, Ekips Technologies, Norman, OK) from 395 steers (mean initial BW = 218.6 ± 22.4 kg). A whole blood sample was also collected for serum haptoglobin (Hp) analysis. Each morning, calves were assessed for clinical signs of BRD. Calves exhibiting one or more signs were assigned a severity score and removed to the processing facility for further examination and treatment. When a steer was treated for signs of BRD, breath and blood samples were collected for eNO and eCO_2 and serum Hp analysis as above. Additionally, clinically healthy control calves were pulled daily for the first 28 days to serve. The calves were taken from each odd numbered pen on odd numbered days and each even numbered pen on even numbered days based on a predetermined randomization. Upon arrival, mean eNO was 309.5 ± 41.1 ppt and mean eCO_2 was 2.64 ± 0.94%. During the trial, 56.0% of calves steers were never treated for BRD, 33.9% were treated only once, and 10.1% were treated more than once. While no differences were observed between arrival eNO or serum Hp and eventual treatment of calves for BRD, eCO_2 was lower ($P = 0.03$) for calves that were never treated (2.3%) than for animals that were treated (2.5%). At the time of treatment, steers treated for signs of BRD had elevated body temperatures compared with controls. Clinically healthy control steers had higher ($P < 0.0001$) eCO_2 (2.62 vs. 2.03%) and lower serum Hp levels ($P < 0.01$; 810.2 vs. 1,439.9 µg/mL) than cattle treated for BRD. Least squares means for eNO values were 368.3 ppt for control steers, 564.5 ppt for steers receiving their first treatment, 369.4 ppt for steers receiving a second treatment, and 462.2 ppt for steers treated a third time, with the only difference ($P < 0.05$) being between control steers and steers treated the first time. When control eNO values were contrasted against the average of the eNO from all treated steers, no difference ($P = 0.29$) was observed. A breath collection technique for cattle using TDLAS was developed and integrated into daily activities at the research facility. While measured values were near the lower detection limits of current instrumentation, and occasional contamination by high ambient nitric oxide levels decreased instrument accuracy, numerical trends suggest eNO might be useful in diagnosing BRD.

A Molecular Modeling Study of the Aluminum Chloride-Promoted Reduction of Benzylidene Acetals

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Presentation Subject Area: Physical Sciences & Technology

Aluminum compounds are used as Lewis acid catalysts in many chemical reactions. The regioselective ring opening of sugar acetals is an often-used reaction but its mechanism is not thoroughly understood. The acetal may be selectively cleaved in the presence of AlCl3 or another Lewis acid catalyst and a hydride reducing agent. The structure of the aluminum catalyst used in this reaction was studied by molecular modeling. This paper will discuss the coordination state of the aluminum catalyst in the reaction and how the solvents toluene and tetrahydrofuran affect the structure of the reactive aluminum species.

Effects of Timing of Weaning in a Fall-Calving System on Performance of Beef Cows and Their Progeny

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Presentation Subject Area: Whiteman Award Presentation

Predominantly Angus beef cows were used in two consecutive years to investigate the effects of timing of weaning on cow body weight and condition, reproductive performance, and calf performance of fall-calving beef cows and their progeny. Cows were assigned to two weaning treatments: (1) Traditional weaning in mid-April at approximately 210 d of age (APRIL) and (2) Late weaning in mid-July at approximately 300 d of age (JULY). Performance data were analyzed by number of years on trial: (1) Cows/calves in their first year on trial (YOT=1) and (2) Cows/calves in their second year on trial (YOT=2). Timing of weaning did not significantly influence performance of YOT=1 cows, however APRIL cows tended to have higher BCS than JULY cows at the July weaning date (6.5 vs 5.9, P=0.14). In their second year on trial, APRIL cows were 37.7 kg heavier (P<.05) with 0.8 units greater BCS (P<0.01) at the July weaning date and 33.6 kg heavier (P<0.10) and 0.7 units greater BCS (P<0.01) at pre-calving than JULY cows. Percent pregnant did not differ between treatments for YOT=1 or YOT=2; however APRIL cows calved 8 d earlier in the next calving season. Calves born to YOT=1 cows after weaning treatments were applied did not differ significantly for any pre-weaning or weaning traits measured. Progeny of JULY cows out-gained APRIL calves from April to July (P<0.10) and were heavier in July, but ADG from birth to July did not differ between treatments. Progeny of APRIL YOT=2 cows tended to be heavier throughout the preweaning period and were heavier (201.1 kg vs 181.9 kg, P<0.05) in April compared to JULY progeny. Although JULY calves had greater ADG from April to July (P<0.01), final wt in July did not differ between treatments. Time of weaning does not influence July calf weight. However, late weaning may cause decreased cow reproductive efficiency over time.

An Analysis of Volatile Organic Compounds (VOCs) in a Residential Complex

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Determination of P bioavailability in corn and sorghum distillers dried grains with solubles for growing pigs.

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A total of 35 barrows (29.6 kg BW) were used in a 34-d study to determine the effects of corn or sorghum distillers dried grains with solubles (DDGS) on growth performance, bone traits, and P bioavailability. One corn and three sorghum DDGS were each collected from a different production plant. Pigs were blocked by weight, ancestry, and randomly allotted to one of seven dietary treatments with five pigs/treatment. The

basal diet was a fortified corn starch-dextrose-soybean meal diet which was adequate in all nutrients except P. This diet contained 0.3% total P, which was provided by soybean meal and monosodium phosphate (MSP). Treatments were the basal, the basal plus MSP to provide 0.075 and 0.15% added P, and the basal plus corn DDGS or the three sorghum DDGS to provide 0.15% P. The corn DDGS contained 0.79% P and the three sorghum DDGS contained 0.80, 0.66, 0.69% P, respectively. All diets were formulated to 1.05% lysine and 0.70% Ca. Pigs were housed individually in stalls with ad libitum access to water and fed at 3.25 times maintenance daily. At the end of the 34-d study, all pigs were killed, the femurs excised, and the feet removed to collect the 3rd and 4th metacarpals and metatarsals. Bone breaking strength was determined and the metacarpals were dried and ashed. Increasing levels of MSP increased (linear, $P < 0.04$) ADG, ADFI, G:F, P intake, and increased (linear, $P < 0.01$) bone strength and ash. DDGS had no effect ($P > 0.10$) on performance or bone traits as compared to the high MSP diet. Also, there were few differences ($P > 0.10$) between corn and sorghum DDGS. Bone traits of pigs fed DDGS were compared to the standard curve for pigs fed increasing MSP. Bone traits were plotted against P intake and bioavailability was determined based on slope ratio. Bioavailability of P was approximately 80% in corn DDGS and one sorghum DDGS and 60% in the other two sorghum DDGS. These results suggest that the bioavailability of P in DDGS is relatively high; however, the bioavailability of P varied between DDGS sources.

Dual-Modality Imaging in SamII Tissue Volumes by a Combination of Optical Coherence Tomography and Diffuse Optical Tomography

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Presentation Subject Area: Biomedical Sciences

This is a preliminary proof-of-principle study toward concurrent near-infrared optical tomography and optical coherence tomography for imaging of small tissue volumes in internal organs. Endoscopic diffuse optical tomography allows imaging tissue-specific contrast in internal organs; however, it is subject to low spatial resolution that is inherent to any DOT techniques. At endoscopy-geometry, optical coherence tomography provides unprecedented spatial resolution in a depth of several millimeters; hence it could serve as an excellent candidate for combination with endoscopic DOT when the imaging depth is confined to sub-surface ranges. This paper demonstrates the principle of combining NIR and OCT in external imaging geometry, the preliminary step before moving on to endoscopy-geometry.

Development of attachment patterns, their continuity across life span and effectiveness of interventions in bringing shifts in attachment trajectories

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Presentation Subject Area: Social Sciences

Attachment patterns are formed in early life based on the attachment relationship with the caregiver. Once formed, these patterns remain somewhat stable across life span. However effective interventions can alter these otherwise continuous patterns. The paper reviews literature on the development of attachment patterns, their stability and effectiveness of interventions in causing positive shifts. The interrelation between the

three aspects is represented by a model. The first part of the model brings together the factors that correlate with development of early life attachment relationship between the child and the caregiver. The middle part of the model shows that the attachment relationship shapes the attachment behavior and representation of the child. The attachment behavior and representation, once formed, continues through childhood, adolescence and adulthood. The final part of the model illustrates that the representation and behavior pattern shaped in early life can be transformed at later stages through interventions.

The Tulsa Outrage: Propaganda and the Repression of the I.W.W. during World War One.

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Presentation Subject Area: Social Sciences

The purpose of this study is to examine the reasons behind the Tulsa Outrage, specifically the role of the Tulsa World in encouraging ignorance, fear, and ultimately violence. In service of local oil producers and with misguided patriotism, the press created a public perception of I.W.W. members as bogeymen, placing blame for most every unexplained tragedy at the foot of the union\s meeting hall. This portrayal was malicious and in many scholarly circles is enduring.

An Examination of Second Life Dot Com

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Presentation Subject Area: Social Sciences

In this paper, I will argue that new forms of Computer Mediated Communication (CMC) provide us with a false escape from the alienation of Postmodern Society, inevitably returning us to said alienation. I will furthermore argue that by applying Erich Fromm's theory of technology (Developed in *To Have or To Be?* and *Revolution of Hope: Towards A Humanized Technology*.) we can come to a clear understanding of this new technology and the ways in which it objectifies human life.

Risk Perception of Internet Apparel Shopping: Among South Korean Young Women University Students in the Apparel Major

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Presentation Subject Area: Environmental Sciences

The purpose of this study was to investigate perception of risks among South Korean young women university students within the process of purchasing apparel products through the Internet. Subjects for the

study were 324 South Korean young women university students who were sophomores, juniors or seniors in the apparel major. The questionnaire was first developed in English and translated into Korean. Data were collected during March 2005 in large apparel classes at four universities in South Korea. Findings of the study showed 30.6 % of subjects had never shopped for apparel on the Internet and 70% of subjects spent less than $199 in six months. The purchasing process particularly regarding delivery and security issues such as identity theft seemed to be a strong concern. On the other hand, unique selection such as apparel brands only available through the Internet was a strong appeal to 37.7% of subjects. Factor analysis profiled risk perception as: 1) Internet Shopping Selection Preference, 2) Delivery Problems and Lack of Security 3) Product Quality and Characteristics 4) Return Policy Difficulties and 5) Fair Prices. Discriminant analysis showed Factors 1, 2 and 3 were significant in helping to differentiate among Non-Purchasers, Fewer-Purchasers and Many-Purchasers. Factor 1 and 3 helped differentiate among respondents relative to age range. Across all types of purchasers, offering unique selections of cutting edge fashions and improving risk perception relative to delivery and security concerns seemed important for gaining greater market share. Being able to delivery quality products and communicate product characteristics despite the inability to examine products would be a powerful competitive edge to add to the incentive of convenience in shopping for apparel on the Internet.

Cultural Product Websites and Casual Consumers: Product definition, product perceptions, and purchase intentions

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Research on cultural products websites has been done with existing customers who have similar characteristics as a group called Cultural Creatives (Lee & Littrell, 2006). They value product authenticity, product origins, and creating a unique home environment. Cultural products (CP) once were selling mostly in specialty stores. However, retailers now are offering mass-produced CP. Therefore, CP are not only exposed to the existing consumers but also to general consumers as well. Little or no research has been done on casual consumers or individuals who may be attracted to CP but does not usually seek out such product. The study's objectives were (1) to understand U.S. consumers' definition and perception of CP; (2) to understand the important characteristics of CP that should be communicated on an Internet website; (3) to identify and evaluate important factors and qualities a CP website should have; (4) to identify factors that influence consumers' intention to purchase CP online; and, (5) to make recommendations for CP websites based on findings from the study.

Theory of reasoned action (TRA) (Fishbien & Ajzen, 1975) was used as a framework to examine relationships between consumer attitude and shopping intention. Questions asking CP definition and term were used. Cultural Creatives characteristics were used to investigate consumers' characteristics and intention to purchase CP. Methods included paper- and web-based questionnaires. Subjects browsed through two websites selling CP and answered series of questions asking their perspectives on CP as a whole and CP from the two websites.

134 college students in upper divisions and graduate years completed the questionnaire. The subjects represent potential individuals who are most likely to start building their own space after graduation. They have independent decision to purchase and decorate their own homes. Additionally, they were the highest groups of individuals who used Internet to search information on products or services and purchase products or services according to the United States Census Bureau in September, 2001 (Census Bureau, 2001).

Over 75% of subjects perceived terms CP, crafts, ethnic products, handcrafted products, and handcrafts as different. The answers were separated to two groups; group 1 placed emphasis on where or how CP was produced and group 2 placed the emphasis on meaning of the terms. The rest of the subject perceived the terms as no different preferred to use term "handcraft" than CP. Key terms should be included in CP description were handmade, authentic, and antique look.

Different level of casual consumers regarding Cultural Creatives perceived characteristics of CP and website selling CP differently. The results also indicated that casual consumers who have stronger characteristics of Cultural Creatives have higher interest in CP and higher intention to purchase CP. An overall perception of one website, which was a for-profit organization, was perceived as more positive than the other. However, when asking about intention to shop from a for-profit versus a non-profit organization, subjects were more willing to shop from a non-profit organization. Finally, the important characteristics of CP and CP websites were found. Recommendations are offered for CP website retailers.

Composite Scaffolds for Tissue Engineering

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Presentation Subject Area: Biomedical Sciences

There are currently over 93,000 people waiting for organ transplants in the United States alone, and every day 17 people die waiting for a transplant (http://www.transweb.org/qa/qa.htm). Tissue engineering is a novel field that seeks to find an alternative to organ transplantation. In tissue engineering, biodegradable materials are used as a scaffolding to guide cellular ingrowth and differentiation. Over time the cells produce their own supporting matrix and the scaffold degrades away leaving only normal healthy tissue. One material of particular interest is small intestinal submucosa (SIS). Porcine SIS has generated immense interest in various tissue engineering applications due to its diverse favorable properties. However, SIS is a natural matrix with heterogeneous properties which lead to problems in large-scale preparation. Therefore the goal of this research is to create a synthetic scaffold that mimics the characteristics of SIS. Composite structures with 3D architecture were developed by sandwiching 50:50 PLGA film between porous chitosan matrices. The outer chitosan layers provide biological activity while the inner PLGA layer provides mechanical strength. PLGA films were initially perforated and porous chitosan matrix was formed sequentially on each side by controlled rate freezing and lyophilization technique. Surface microarchitecture of formed matrices confirmed that chitosan passed through the perforations of PLGA membrane. Formed matrices were analyzed for tensile strength which showed that matrices formed using 160 kDa PLGA had sufficient break stress (~4.5MPa). Over an eight hour period, the composites were largely impermeable to urea. Formed scaffolds were analyzed for degradation characteristics over the course of four weeks in presence of 10 mg/L lysozyme. These results showed no significant difference in the weight loss and dimension changes. The typical spindle shape was apparent when cellular adhesion and actin distribution of mouse embryonic fibroblasts were evaluated in the 3D scaffolds. Redistribution of actin fibers was also observed on 3-D chitosan matrices. In summary, by forming a three layer composite structure the strengths of each polymer are accentuated while the weaknesses are minimized.

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The Pruitt-Igoe Projects: Social Control, Civil Disorder, and the Failure of Public Housing, 1955-1976

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Presentation Subject Area: Social Sciences

Completed in 1955 in St. Louis, Missouri amid international fanfare, the massive Pruitt-Igoe public housing complex included thirty-three buildings of eleven stories each. However, the complex quickly devolved to the point that city officials chose to dynamite it from 1972 to 1976 because they deemed the complex to be uninhabitable. In addition to the political and economic reasons for Pruitt-Igoe's demise, I also analyze the social and cultural implications of the destruction of Pruitt-Igoe, which--according to some critics marked the end of modernism and the beginning of postmodernism. Regardless of the specific factors of the complex's demise, the fate of the Pruitt-Igoe is not just the story of failed architecture or the failure of urban renewal in one city, but provides insight into the larger context of urban America and the crisis situation of the late Vietnam-War era.

Relationship Between Musical and Spiritual Identification

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Presentation Subject Area: Social Sciences

The purpose of this study was to examine the relationship between music and spiritual identification. Participants of the study completed a survey containing questions pertaining to musical ability-background, music appreciation, and spirituality. Statistical analysis was performed on the data to examine the relationship between music and spirituality. The researcher hypothesized those individuals who score highly on a music appreciation scale would also score highly on a spirituality scale and vice-versa. Results from this study support the initial hypothesis of the researcher. Analysis of the data showed a statistically significant correlation between the music appreciation scale and one of the spirituality subscales, Religious Well-Being. Further analysis also validated the Musical Ability-Background scale developed by the researcher for use in this study.

Developing a New Hotel Performance Measurement System: Application of the Balanced Scorecard and the Fuzzy-Analytical Hierarchy Process Model

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Presentation Subject Area: Social Sciences

Despite the recent advances in performance measurement, hotel managers have constantly looked for a new effective measurement system to evaluate an organization's performance. The main goal of this study is to develop and test a new performance measurement that employs the balanced scorecard (BSC) and the fuzzy-AHP (Analytic Hierarchy Process) in the hotel industry. Two surveys were conducted. The first survey was conducted among a group of hotel experts in order to identify core performance drivers that are significant

for the performance evaluation. With the core attributes determined, the second survey was conducted among a group of selected people working in luxury hotels. This survey determined priorities among the selected attributes using the AHP (Analytic Hierarchy Process) and fuzzy numbers. The results showed that financial perspective was considered most important (36%) among the four given performance measure categorized by the BSC, followed by customers (31%), learning and growth (18%), and internal business perspective (15%). Within these factors, ROI, revisit percentage, employee satisfaction, and occupancy rate were determined as core factors in the each category. From the results, the study showed that the financial dimension was still the strongest among other drivers when evaluating a hotel's performance. At the end, a total performance score for each hotel was determined using fuzzy numbers and the ranking of performance among the nine hotels revealed the applicability of the new index developed in the study. The results suggest that hotel management consider using the new proposed evaluation model as a supplement to their traditional performance measures.

Estrus and luteal activity of postpartum anestrous beef cows after treatment with estradiol cypionate

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Multiparous Hereford x Angus postpartum cows (n = 49) were used to determine the effects of days post partum (25 or 50 d) and body condition score (BCS) at calving (M ≥; 5 or T < 5) on estrus and luteal activity after treatment with estradiol cypionate (ECP). Cows were fed 1.8 kg/d of a 40% CP supplement and ad libitum hay after calving. An estrous detection system (Heatwatch, DDX inc.) was used commencing at 10 d before treatment. Cows were treated (im) with 1 mg ECP or corn oil (C) at 25 or 50 d after calving. Progesterone was quantified in plasma samples obtained from cows twice weekly for 2 wk before treatment, daily for 7 d after treatment, and twice weekly until the second estrus or 90 d after calving. Ovaries were examined by ultrasonography at treatment and concentrations of progesterone in plasma were used to ascertain the absence of corpora lutea. Data were analyzed with the GLM procedure (SAS). Treatment of cows with ECP at 25 d after calving increased ($P < 0.001$) the incidence of estrus within 4 d after treatment in M (55 vs 11 %) and T (50 vs 0 %) cows. Treatment of T cows at 50 d after calving increased ($P < 0.001$) estrus within 4 d (50 vs 0 %). Only 10 % of M cows were anovulatory at 50 d after calving and the response to ECP could not be evaluated. Treatment with ECP did not influence the onset of ovarian luteal activity (LA, progesterone >1ng/ml for 1 d) within 10 d after treatment. Onset of LA after calving was at 53 ± 16 d for M cows compared with 82 ± 18 d for thin cows ($P < 0.001$). Days to LA were greater ($P < 0.05$) for T and M cows treated with ECP at 25 d post partum (74 ± 23 d) compared with C cows (53 ±16 d), and ECP tended to increase ($P = 0.07$) days to LA for T cows treated at 50 d post partum. BCS of cows did not influence the incidence of estrus when cows were treated with ECP at 25 d after calving. Although ECP induced estrus in beef cows during the first 50 d after calving, normal luteal function was not initiated.

The Psi Phenomena: Maximizing Psi with the Ganzfeld Procedure

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Presentation Subject Area: Social Sciences

Questions such as, 'Does psi exists?' has been key in ganzfeld debate. In this replication study, restructuring the ganzfeld procedure will be looked at as a way of ending the current debate & an attempt to answer the question of the existence of psi. In this study, students were asked to be involved in a procedure that used sensory deprivation of the participants to enhance the occurrence of psi. The procedure involved 2 participants that were secluded in 2 separate rooms, one participant (the sender) was instructed to telepathy send a target image to the other participant (the receiver). With the fresh methodology used in the current study of the ganzfeld procedure it was predicted that the results would prove a higher powered study. After conducting the experiment with the new methodology it was found that retesting the participants does not increase the chances of finding psi, due to the non-significant data.

Environmental Benefits of CRP in Texas County Oklahoma: A Study Using GIS

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Presentation Subject Area: Environmental Sciences

The Conservation Reserve Program (CRP) started in 1986 with the enactment of Title XII of the Food and Security Act of 1985 passed by Congress. Land is retired for 10 to 15 years and planted with either trees or grass. Studies have shown environmental benefits of the CRP. This study addresses the question of how these environmental benefits can be maintained after the expiration of the CRP contracts in Texas County Oklahoma. The CRP has brought change to the Texas County landscape resulting in increase in minimum patch size (17%), reduction in number of patches (-15%), and total edge (-4%). The CRP has targeted areas important for natural resource conservation by converting areas of concern to CRP tracts shown by reduction of such areas e.g. fallow (-41%), small grains (-16%), row crops (-22%), and wetland (-19%). But conversion of pre-CRP grassland has resulted in loss of habitat for some native species except for those that could use CRP tracts as habitat e.g. mean patch size reduced for those species that could not use CRP tracts as habitat. This study has demonstrated that environmental benefits can still be maintained by using part of the CRP coming out of contract for row crops (9.13%), pasture (6.58%), and wildlife (84.29%). Additionally, 13.53% of the CRP tracts should be monitored for groundwater quality and 62.18% for surface water quality. Modeling of crop production shows that crops can be produced profitably with minimum soil loss in the CRP tracts.

Video Game Addiction: Truth or Fiction

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Presentation Subject Area: Social Sciences

Video game addiction is a phenomenon that is currently being researched to determine its clinical merit as an addiction disorder. Most research places video game addiction in the category of behavioral or technological addictions. Experts hypothesize that video game addiction occurs as a result of physiological arousal during video game play. Measures of physiological arousal (heart rate, blood pressure) are used in this experiment to determine whether video game play increases physiological arousal. Comparisons of physiological arousal will also be used to establish whether violent and non-violent video games are differentially arousing. This experiment also uses the PVP scale, as devised by Salguero and Moran (2002), and self-report measures to verify whether participants display problems with video game use.

Tricksters: Master Minding the Art of Agency

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Presentation Subject Area: Humanities

This project reflects an interdisciplinary appreciation and understanding of a misunderstood and underrepresented figure originating in African culture. Because Tricksters are, by nature, boundary crossers, it is necessary to make sense of chaos while searching for generalizations, thematic interpretations, and purpose. This study offers specific examples of inter-textual dialogue and means of communication among Trickster authors, Trickster scholars, and Trickster readers (without restricting or stifling the imagination) to shape and guide a focused study and to use humor, history, memory and movement as tools for examination. Trickster is a cultural and historical persona and a means of understanding, analyzing, and developing a multicultural sensitivity in order to better understand people who are marginalized. This is a study designed to create multicultural sensitivity to better understand behaviors and circumstances that shape and enhance the identity of significant, yet nearly unrecognized, figures of cultural, social, and political importance. With a primary focus on Nalo Hopkinson's Midnight Robber this study explores Trickster, as a universal idea an entity who reflects biases in order to defeat a stereotype, establish agency, or to achieve an objective. Trickster helps reconcile the relationships among individuals society and culture, and among past, present and future.

Stochastic Risk Assessment for Lake Eucha Spavinaw Watershed

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Presentation Subject Area: Environmental Sciences

A main objective of this study was to test the feasibility of developing a risk programming (optimization) model directly from the outputs of a biophysical simulation model to determine the most efficient locations for non-point source abatement in a watershed. The SWAT (Soil Water Assessment Tool) simulation model

with 60 years of weather data was used estimate biomass consumption by cattle and phosphorus runoff from seven levels of litter application. Then a Target MOTAD model with 60 years of phosphorus runoff was used to determine the cost and the management practices that should be used in each area of the watershed so average phosphorus loading and the deviations of these loadings above alternative phosphorus loss targets (possible Total Maximum Daily Loads (TMDLs) were met. The ability to put a limit on deviations above a pollution target provides an estimate of the costs associated with the margin of safety associated with setting a TMDL in a watershed.

The feasibility of developing a Target MOTAD optimization model, directly from outputs of a simulation model developed and calibrated by hydrologists that could determine the most efficient management practices, under stochastic conditions for each sub area within a watershed was demonstrated. The results also demonstrated that the cost of reducing phosphorus runoff varied significantly between soil types. It was found that for some soils zero litter applications (no fertilizer) actually increased phosphorus loss through erosion of soil sediments. It was optimal to apply more litter to some soils than to others which implies that policies based on non uniform litter application are the most cost effective. The cost of reducing phosphorus runoff from the watershed increased rapidly as attempts were made to reduce annual loadings by more than 15 Mg per year.

AB INITIO MOLECULAR DYNAMICS (AIMD) Methods for development of accurate interatomic potentials

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Presentation Subject Area: Physical Sciences & Technology

In this study a new approach is presented for the development of accurate potential-energy hypersurfaces based on ab initio calculations that can be utilized to conduct molecular dynamics and Monte Carlo simulations to study chemical and mechanical properties at the atomistic level. The method integrates ab initio electronic structure calculations with the interpolation capability of multilayer neural networks. A sampling technique based on novelty detection is also developed to ensure that the neural network fitting for the potential energy spans the entire configuration space involved during the simulation. The procedure can be initiated using an empirical potential or direct dynamics simulation. Genetic algorithm was used to find a set of parameters for an empirical potential that best fits the data from ab initio calculations. The procedure is applied for developing the potential energy hypersurface for 5-atom clusters within a silicon workpiece. Ab initio calculations were performed using Gaussian 98 electronic structure program. Results for 5-atom silicon clusters representing the bulk and the surface structure are presented. Also, the reaction dynamics of vibrationally excited vinyl bromide molecule is studied.

Develop vibrational structural makers for probing the protonation state and hydrogen bonding interactions of tyrosine in proteins and their functional intermediates

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Presentation Subject Area: Biological Sciences

Proteins are dynamic in nature. In order to understand how a protein performs its function based on laws of physics, it is critical to probe and investigate functionally important structural transitions of the protein. Time-resolved infrared spectroscopy offers excellent time resolution (picoseconds to seconds), and contains extensive structural information. The real challenge is how to extract structural information from time-resolved infrared data. We will report computational methods for developing vibrational structural markers of tyrosine. Using density function theory (DFT) based first principle computational studies combined with experimental data, we found that it is possible to unambiguously determine if the phenolic ring in Tyrosine is neutral or negatively charged based on the frequency of one ring vibrational mode. In addition, we show that it possible to determine the number and nature of hydrogen bonding interactions of a phenolic group in proteins using a combination of C-O stretching and O-H stretching frequencies (2D vibrational spectroscopy).

Determination of Least Cost Phosphorus Abatement Practices in a Watershed under Stochastic Conditions

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Presentation Subject Area: Environmental Sciences

Problem Statement: Total Maximum Daily Loads (TMDLs) are being implemented to prevent eutrophication of public water supplies by phosphorus runoff from manure applications in many watersheds. Agricultural pollution attributed to excessive land application of manure is a serious environmental problem for surface water quality in the Eucha-Spavinaw watershed on the border of the states of Oklahoma and Arkansas. This watershed is of interest because there is very little cropland in the watershed, most of the non-point pollution comes from fertilized pastures and because eutrophication threatens a metropolitan water supply. Eutrophication of the Lakes Eucha and Spavinaw cause algal blooms that in turn impair the taste of the drinking water. The bad taste and odor are difficult and prohibitively expensive to improve by water treatment. There is need for regulations and nutrient management plans to reduce agricultural pollution. This study determines the least cost mix, location, and magnitude of management practices and the optimal transportation pattern for poultry litter to meet maximum average annual nitrogen and phosphorus loads entering Lakes Eucha and Spavinaw within specified margins of safety.

Data and Methods: Soil and Water Assessment Tool (SWAT) software is used as a biophysical model to simulate total plant biomass, crop yields, sediment, nitrogen and phosphorus load for 60-yr period. The simulation was run for a series of fifty alternative pasture management practices in each HRU. Sixty years of randomly selected daily rainfall and temperature records were used to simulate each set of management practices. The SWAT output was input into a Target MOTAD model to identify management practices for each site in the watershed that maximizes returns from grazing while meeting specified environmental improving nitrogen and phosphorus runoff restrictions for the watershed at least social cost within a specified deviation over the target.

Results and Discussion: There is no single management practice that dominates in all parts of the watershed. Current results show that optimal poultry litter application rates can vary from one soil type to another within the watershed. This implies that it may be more cost effective to develop phosphorus reduction programs that target specific soil types within the watershed rather than continue with the current uniform policy of limiting litter application rates strictly by soil test phosphorus. Programs that pay producers not to use pastures for grazing are efficient in some locations under some nutrient load limitations. Complete elimination of all fertilizer was found to actually increase total phosphorus loss on some soils because of increased erosion and sediment bound phosphorus. As anticipated, large increases in the use of commercial nitrogen to replace poultry litter and reduce phosphorus runoff do increase nitrogen loss. As either average annual limit on nutrient loss or the average deviations above the limit are reduced more of the litter is converted to energy or hauled from the watershed. The litter-to-energy plant does not appear profitable on its own merit but becomes a more cost effective method of reducing both the level and the variability of phosphorus runoff as pollution limits are reduced.

Weed detection using digital images in Wheat fields

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Presentation Subject Area: Physical Sciences & Technology

Weed control by variable rate application of herbicide reduces cost and environmental damage. For variable rate application, machine vision based systems have been reported with varied success. In these systems, time lag between image acquisition and control actuation is crucial which depends largely on pixels resolution. Low resolution images reduce crop-weed detection accuracy whereas; high resolution images take longer time. This study was conducted to decide pixel size tradeoffs in crop-weed detection. A digital color camera was used for taking images in commercially grown crop after 30 days of seeding. The images were taken at highest camera resolution and then reduced to lower resolution by averaging the neighboring pixel values. Segmentation was done by modified excess green method. Crop and weed images were then extracted from field images. Extracted images were eroded to separate overlapping leaves and then dilated to regain original shapes. Separate images were used for training and testing using Bayesian classifier. The wheat classification accuracy was poor whereas; weed classification accuracy was 90.6% and 86.6% for high and medium resolutions. At lowest resolution, weed images were not suitable for classification. This study revealed insights into optimization of pixel size in wheat-weed discrimination using machine vision systems.

Hot.Steamy.Touchy.Taboo:Reloaded. News Framing and Interracial Intimacy

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Presentation Subject Area: Social Sciences

This research examined broadcast coverage of a controversial Monday Night Football promo featuring Terrell Owens and a Desperate Housewives star. Immediately after the promo aired, ABC and the FCC

received thousands of indecency complaints, but there was also an interracial aspect. Some viewers were concerned about having a black man paired with a white woman. This study was a continuation of last summer's research, in which journalist framed the incident as an indecency issue. In this quantitative content analysis of 121 broadcast transcripts were examined for six-months following the incident to determine how broadcasters framed the incident. Results showed broadcasters were much more likely to frame the story as an indecency issue rather than an interracial issue.

Effects of bovine respiratory pathogens on immune response and short-term performance of finishing cattle

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Bovine Respiratory Disease (BRD) costs the feedlot cattle industry millions of dollars annually in medical expenses, labor and decreased performance in finishing steers and heifers. The objective of this experiment was to determine the effects of a BRD pathogen (*Mannheimia hemolytica*) challenge following short-term exposure (72 h) to Bovine Viral Diarrhea (BVD) persistently infected calves on white blood cell count (WBC) and populations as well as feed intake and associated performance. Treatments included: 1) steers not challenged with BVD or *M. hemolytica* (Control); 2) steers intratracheally challenged with *M. hemolytica* (Mh); 3) steers challenged with 72 hour exposure to steers persistently infected with BVD (BVD); and 4) steers with 72 hour exposure to steers persistently infected with BVD and intratracheally challenged with *M. hemolytica* (BVD+Mh). Six animals (initial BW = 305 ± 20.4 kg) per treatment were allocated to metabolic stanchions during the first 5 days of the experiment and during the second week after the challenge to determine daily feed intake and N balance. For the immune response measurements blood samples were collected pre-challenge and at -72, 0, 7, 18, 36, 72, 96, 168, 168 and 672 h post challenge and total and differential WBC counts were performed. Feed intake and gain efficiency were analyzed as a randomized complete block with weight block serving as a random effect. For rectal temperature, antibody concentrations and WBC a repeated measure analysis was performed using a first-order autoregressive correlation structure for all variables. Rectal temperature was greater ($P < 0.001$) in the BVD+Mh and Mh groups during the first 24 h after the Mh challenge. For BVD+Mh and Mh, total WBC was greater ($P < 0.01$) at 36 h post *M. hemolytica* challenge compared with control, whereas in the BVD steers, WBC was lower ($P < 0.01$) during the same time. Total lymphocyte count (TLC) was lower ($P = 0.004$) during the first 72 h post BVD exposure for both the BVD and BVD+Mh groups compared with the Mh and control, and this difference remained after 96 h post *M. hemolytica* challenge. An increased ($P < 0.001$) total neutrophil count (TNC) was observed during the first 36 h for the Mh group and for 72 h for the BVD+Mh challenge group. In the short term (first 17 days) performance, a numerical difference ($P > 0.10$) was observed for ADG (2.85, 2.30, 1.93 and 1.65 lb/d) and gain efficiency (0.180, 0.122, 0.110 and 0.092) for control, BVD, BVD+Mh, and Mh steers, respectively. Based on these results we can conclude that the disease challenge model utilized in this experiment was successful in the induction of BRD associated with BVD and *M. hemolytica*. Understanding the physiological changes in morbid animals will lead to improved strategies for decreasing the incidence and economic losses associated with bovine respiratory disease

The Role of Copulatory Behavior within the Social Structure in Bachelor Groups of Captive Western Lowland Gorillas

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Presentation Subject Area: Social Sciences

Modern zoological parks that house western lowland gorilla populations prefer to accommodate single-male/multi-female groups, which include their sexually immature young. The result is an excess of adolescent, sub-adult, and adult bachelor male gorillas that must be housed and displayed collectively. Due to the increase of gorilla bachelor groups in the zoological community, the social structures of these all-male groups are more accessible to research. This observational study focuses on copulatory behavior within these groups and its role in the current hierarchical relationships among the group\s members. Observations were conducted at the Sedgwick County Zoo in Wichita, Kansas. The Sedgwick County Zoo has eight male gorillas in three separate groups; two groups of two silverback males, and one group of four sub-adult/adolescent males. Only the group of four was observed for this study. Observations occurred over fifteen non-consecutive days and were three hours in length during mornings and early afternoons. The observational method used was group-scan sampling every five minutes with documentation of affiliative behavior within two meters or less. The social order within this group is complex and varies between dyads of individuals and the group of four. The rank of an individual was estimated by size, age, and displacement frequencies. This study suggests that sexual activity within this bachelor group may be integral to the greater social bonding dynamic.

Spiroplasma citri infection affects yield and fruit quality in commercial citrus grove in California

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The chronic effects of citrus stubborn disease caused by Spiroplasma citri, a cell wall-less bacterium, include severe tree stunting, short branch internodes, poor fruit production and asymmetrical fruit shape. However, the effects of S. citri on trees with mild to moderate symptoms in commercial groves have not been quantitated. The objectives of this work were to assess the impact of S. citri infection on tree development, fruit yield and quality. Over 400 trees in one commercial grove in central California were evaluated for S. citri presence by cultivation in LD8 medium. Subsequently, 20 infected and 20 apparently healthy trees were selected for evaluations. Measurements taken included: tree height and width, rootstock and scion diameters, and fruit drop. Thirty fruits per tree were randomly harvested and weighed, and the length and width were measured. The presence of sunburn and/or cracks was recorded, and peel color was evaluated. Finally, the juice was extracted and weighed and the total soluble solids (Brix) and the titratable acidity were measured. Trees infected with S. citri had reduced scion diameter, increased fruit drop and decreased final yield in comparison with non infected trees. With respect to fruit quality, infected trees showed a higher number of fruits with cracks than non infected trees. Peel color, sunburn and all juice parameters were not statistically different for infected and healthy trees. These results show that S. citri infection significantly reduces citrus fruit production and quality, and validate the concern among growers in California Central Valley about stubborn disease.

Frequency Distribution of amino Acids in Proteins: Parachlamydia

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Parachlamydia is composed of 2031 proteins sequences. According to the enzymatic functions, only 495 protein sequences have been classified. This research will analyze the occurrences of the twenty amino acids found in parachlamydia and examine each amino acid in each classification.

Frequency distributions of protein sequences have been used in research for analyzing various topics in science. Therefore, this study will also focus on constructing frequency distributions to determine if certain amino acids occur more frequently than others.

Can Intimacy be Obtained Without A Sexual Encounter?

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Presentation Subject Area: Social Sciences

Although one might expect that sex will add intimacy to a relationship, the researcher maintained that intimate relations thrive in the absence of sex. The researcher examined the possibility of a person having sex without feeling emotionally connected; of one achieving intimacy without a sexual encounter, and the perception that emotional cheating may prove just as bad as physical cheating. This research explored the importance of intimacy, while examining the deceptions of sex and intimacy, as it relates to emotional cheating, non-sexual relationships, and the evolution over the past several years of the meaning of sex and intimacy.

Prescribed fire and cattle grazing impact butterfly communities in tallgrass prairie

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Presentation Subject Area: Environmental Sciences

The tallgrass prairie region of the United States hosts a number of grassland-obligate butterfly species. Paradoxically, though tallgrass prairie requires periodic disturbance to keep cover of woody plants in check, empirical evidence suggests that some grassland-obligate butterfly species are imperiled by disturbance agents such as fire and grazing. For example, some prior studies of the regal fritillary (Speyeria idalia) have appeared to show strongly negative effects of cool-season prescribed burning on this species. We examined the effects of fire and grazing on the abundance of over 20 butterfly taxa, including the regal fritillary, at five tallgrass prairie sites in southwestern and west-central Missouri. Each prairie site consisted of two adjacent pastures: one that was patch-burned and stocked with IES steers from late April to August, and one that was patch-burned but not stocked with cattle. Each pasture was divided into three equal-sized burn units, with fire rotated among units in early April of 2005, 2006, and 2007. Indices of butterfly abundance were obtained via modified Pollard transects in late May, early June, late June, and mid-July of 2006, with at least

one transect (and usually two) performed within each patch. We measured the abundance of nectar sources in each patch contemporaneously with butterfly sampling. Management regime did indeed impact the abundance of multiple butterfly species. We observed a strong interaction between burning and grazing. Patches within grazed units that had been burned in early 2006 were almost completely devoid of butterflies for much of the summer, whereas patches within ungrazed units that had also been burned in early 2006 often supported large populations of butterflies. The effects of the management practices on nectar availability may explain much of the variation in butterfly abundance.

The Effects of Citing Group Membership on Social Interactions

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Presentation Subject Area: Education

Research has largely examined the effects of revealing one's social identity to another individual. In this study we were interested in the impressions formed by observers when someone revealed their social identity. We examined this in two different contexts: an attitude change attempt and a workplace situation. The attitude change attempt in this study consisted of a 3 (Group: control versus out-group member who states irrelevant social identity information versus out-group member who states relevant social identity information) x 2 (Position: amnesty versus deportation) design surrounding the issues of immigration. After an analysis of covariance was completed, significant main effects for position were found in participants' ratings of the target student's intelligence, friendliness, helpfulness, humbleness, coldness, likeability and the likelihood of becoming friends with the target student. The target student in the amnesty position was perceived to be significantly more intelligent, friendlier, helpful, and humble than the target student in the deportation position. The target student in the deportation position was perceived to be significantly colder than the target student in the amnesty position. Also, the target student in the amnesty position was liked significantly more and had a significantly higher likelihood of becoming friends with the observer than the target student in the deportation position. The workplace situation in this study concerned the invisible social identity of religion, or lack thereof, in a workplace environment. The three primary research conditions in the workplace situation were (1) control, (2) excuse and (3) out-group member atheist. A one-way analysis of variance revealed a significant effect on ratings of honesty of the professor in the workplace situation. Upon this finding, the Student-Newman-Keuls Test revealed that the professor in the excuse condition was perceived to be significantly less honest than the professor in the control condition. However, neither of these conditions differed significantly from the professor in the out-group condition. Contrary to our expectation, we did not find any significant effects for the citing of group membership. Possible explanations for these results and suggestions for future research are discussed.

Preliminary computational model for trans-rectal near-infrared optical tomography

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Presentation Subject Area: Biomedical Sciences

Prostate cancer will affect 1 in 6 men during their lifetime. Current methods to detect and diagnose prostate cancer are not definitive. Specifically, ultrasound imaging of a suspected tumor within the prostate can be

difficult due to the lack of contrast between cancerous and healthy tissue. Accurate determination of the suspected tumor is essential for an accurate tissue biopsy. Near-Infrared (NIR) optical tomography imaging has been established to effectively determine the contrast between healthy and cancerous tissue. Due to the depth of the prostate within the body, typical NIR optical tomography systems are unable to image the prostate. To enhance tissue biopsy, the optical imaging laboratory is beginning development of a unique trans-rectal probe to apply the NIR contrast to the ultrasound image.

To understand and improve the performance of our prototype system, a computer model is desired. Recently it has been discovered that typical analytical models are not adequate to describe our new design. This paper presents an initial investigation of analytical and numerical models applied to our new probe design.

Metagenomic Analysis of Plants from the Tallgrass Prairie Preserve

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Presentation Subject Area: Biological Sciences

The number of virus species identified by the International Committee for the Taxonomy of Viruses is likely to be far less than the actual number of viruses present. A metagenomic approach is being taken to discover novel viruses from plants in the Tallgrass Prairie Preserve. Small aliquots of plant material were subjected to homogenization and two rounds of differential centrifugation to isolate virus-like particles. The pellet obtained was treated successively with DNase-I to remove contaminating plant DNA and proteinase-K, sodium dodecyl sulfate to digest the DNase-I and capsid proteins. The released viral DNA or RNA was precipitated using ethanol and dissolved for use as viral nucleic acid (VNA). The VNA was amplified by reverse transcription and PCR using degenerate primers. The PCR products were cloned and sequenced. The sequences obtained were assembled into contigs and identified by comparison with reference genomes available in sequence databases. To date, 100 plants were analyzed; of these 41 were PCR positive. Of these, 20 were sequenced yielding identification of 4 novel plant viruses and 1 novel fungal virus. The sequences also suggested the presence of retroviral particles and endophytic bacteria and fungi. The contigs were further clustered together using a multiple sequence alignment program to obtain an idea of the extent to which the viral genomes were covered. All the viruses that were identified were isolated from healthy-looking plants. This study will help in identification of novel and potentially plant pathogenic viruses. Knowledge about such viruses existing in non-managed environments will better prepare us for possible outbreaks. Also, the knowledge of new viruses will lead to better understanding of virus biodiversity, ecology and evolution.

Welfare Implications of Selected Supply and Demand Shocks on Producers and Marketers of U.S. Meats

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Presentation Subject Area: Social Sciences

An equilibrium displacement model is developed and used to estimate the impacts of recent shocks and policy variables (beef and pork promotions, COOL, and Japanese and South Korean bans of U.S. beef) on producers and marketers of U.S. meats. The results indicate that beef and pork promotions increase producer

surplus for producers and marketers of U.S. beef and pork and decrease producer surplus for producers and marketers of U.S. poultry. Moreover, the results indicate that COOL decreases producer surplus of U.S. beef and pork producers unless accompanied with a demand increase of at least 2%. For both promotion and COOL scenarios, retailer oilgopsony market power decreases the welfare of U.S. meat producers. The results also show that modeling the U.S. meat industry with trade increases the effectiveness of beef and pork promotions and decrease the negative impact of COOL. The Japanese and South Korean bans on U.S. beef decrease the producer surplus of producers and marketers of U.S. beef and increase the producer surplus for producers and marketers of competing beef products, which are marketed in Japan and South Korea.

Modulation of DFP toxicity by direct and indirect cannabinergic agonists

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Diisopropylfluorophosphate (DFP) is a volatile organophosphorus (OP) compound and structural analog of the OP nerve agent, sarin. DFP elicits neurotoxicity by inhibiting acetylcholinesterase (AChE), leading to accumulation of the neurotransmitter acetylcholine (Ach) at synapses throughout the body. Cannabinoids inhibit the release of several neurotransmitters including Ach through a widely distributed retrograde signaling pathway. Modulation of cannabinergic signaling may, therefore, be a potential strategy in therapeutic management of OP poisoning. We evaluated effects of both direct (WIN 55,212-2) and indirect (URB-597 and AM-404) cannabinoid agonists on DFP-induced cholinergic toxicity. Groups of adult male rats (n=5) were treated with vehicle, DFP (2.5 mg/kg, sc), or DFP plus cannabinoid agonist {WIN 55,212-2, (1.5 mg/kg); URB-597 (3 mg/kg); and AM-404 (10 mg/kg)}, observed for signs of toxicity, and sacrificed 24 hours later for measurement of cholinergic (ChE activity) and cannabinergic {fatty acid amide hydrolase (FAAH) activity and cannabinoid type-1 receptor (CB1R) binding} markers in hippocampus. Results indicated that DFP is a potent inhibitor of ChE (IC50 = 343 nM), FAAH (IC50 = 56 μM), and CB1R (IC50 = 4.3 μM) in vitro. Rats exposed to DFP alone showed typical signs of cholinergic toxicity such as involuntary movements and excessive secretions (SLUD signs). Cholinesterase and FAAH activities were significantly reduced (85-90% and 35-40%, respectively) while CB1R receptor binding was not affected. All three cannabinoid agonists markedly reduced involuntary movements while SLUD signs were relatively unaffected. No interactions on neurochemical endpoints were noted with either WIN or AM-404 whereas URB-597 caused additive FAAH inhibition activity (total 60%). Together, the results suggest that cannabinoid agonists can attenuate some aspects of the acute toxicity of DFP. Though the exact mechanism of protection is yet to be demonstrated, these findings provide rationale for further investigations on the use of cannabinergic drugs in the treatment of OP intoxication.

Taking ENGL 2113 to a conference: Using conference simulations in sophomore English

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Presentation Subject Area: Education

This presentation discusses the use of a conference format in teaching a required English composition course to undergraduates. The focus of the course is student research and presentation; thus, simulating a conference was a natural fit for the course's overall goals. Students worked in one of four committees: the Call for Proposals committee, the proposal evaluation committee, the program committee, and the conference facilitation committee. The students chaired or co-chaired one of these committees. Although none of the students had presented at a conference or submitted a proposal for presentation, they quickly grasped the professionalism associated with these tasks. Debriefing revealed overwhelming support for the conference approach to teaching research and presentation skills.

Inventory Management System of Farm Supply Cooperative

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Presentation Subject Area: Social Sciences

Every industry, including farm supply cooperative, strives for an effective inventory management system. This allows an organization to reduce its total costs and ensures product availability and buffering against everyday uncertainties. Nonetheless, having an effective inventory management has been a challenge to Oklahoma farm supply cooperatives. Thus, the objectives of this study are: first, to examine farm supply cooperative inventory management practices and second, to identify improved inventory control strategy. The inventory data of a farm supply cooperative, with 14 branches located throughout the state of Oklahoma is used to achieve these objectives. Items traded in this cooperative are classified into eleven (11) groups of products that are commonly carried by farm supply cooperatives for further analysis.

The inventory turnover ratio (ITR) and the inventory management index (IMI) are used to accomplish the first objective. Using these two devices in examining the inventory performance of this cooperative, it is found that the inventory performance of each group of items varies significantly among the branches and the improvement in inventory management should be done for each group of items in each branch. In achieving the second objective, the improved inventory management strategies related to three main trading activities—sale, purchase, and transfer—are developed. It is found that the strategy developed in this study significantly improved the inventory performance of some groups of items.

Economic Feasibility of Animal Manure as a substitute for commercial fertilizer

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Presentation Subject Area: Environmental Sciences

As the price of natural gas is ever-increasing, more crop producers are considering animal manure as a substitute for commercial fertilizer. However, despite this large potential of economic benefit from substituting manure, not only can manure degrade the quality of our water, soil, and air resources but also, can impose additional handling costs on farmers. Unlike commercial fertilizer, all nutrients in animal manure are not available for plant uptake due to insolubility of nutrients and the nitrogen content in the manure applied to the land is largely affected by not only the method of storage and application but also the timing of land disposal (Zhang, 2003). Furthermore, ratios of nitrogen, phosphorous, and potassium in manure do not match relative quantities required by plants, therefore there is a tendency for nutrients like phosphorous to be built up within the soil.

Previous studies on animal manure have mainly focused on management decisions aimed to meet environmental regulations or the use of animal manure as a substitute for commercial fertilizer. Nunez and McCann (2004) found that the awareness of other farmers using manure, off-farm income, location, transportation costs and the smell make a significant effect on farmers' willingness to use manure in the model. Norwood et al. (2005) estimated the average willingness to pay for dry manure by crop. Carreira (2004) also compared the profitability of two irrigation systems (surface drip and center pivot sprinkler) using swine effluents with simulated EPIC data.

This paper provides an economic analysis of long-term data from an Oklahoma Panhandle research project involving applications of anhydrous ammonia (AA), beef manure (BM), and swine effluent (SE) to irrigated corn. Estimated crop response and two carryover functions (Nitrogen, pH) are combined in the dynamic optimization model to get a long- term optimal rate of nitrogen for each source. An optimal rate for each source will be compared to determine profitability of animal manure.

Multi-year data with yield of irrigated continuous corn and soil characteristics generated at the Oklahoma Panhandle Research and Extension Center near Goodwell, OK was used in this study. Nitrogen from AA, BM, and SE was applied at four different annual application rates (0, 56, 168, and 504 N kg per hectare) in a randomized complete block design.

Results show that given prices of corn and nitrogen fertilizers, as well as, animal manures provide a higher NPV of return than ammonia fertilizer. However, some caution should be taken with interpreting results. Nitrogen application optimal rules derived here are only applicable to a limited circumstance and should be evaluated on a field-by-field basis. Further research is necessary to address three important issues; phosphorous accumulation under the manure application, and uncertainty regarding nutrients in the manure. In addition, it is important to evaluate the effects of both nitrate losses and costs for manure analysis on the profitability of manure relative to commercial fertilizer.

The effect of Jeju Islands image on tourists post-visit behavior

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Presentation Subject Area: Social Sciences

The study aimed to examine the relationship between the dimensions of destination image, tourists' satisfaction, and post-visit behavior on Jeju Island, Korea. The empirical study was carried out in Jeju Island, Korea during summer in 2003. The SEM (Structure Equation Model) is used to verify the certainty of the relation of cause and effect. The image of Jeju Island was assessed on four factors, and three factors among them have a significant effect on satisfaction, and also influence post-visit behavior. The findings of this study contribute to development of the marketing strategies to satisfy tourists' needs on Jeju Island.

Microarray analysis of Arabidopsis nudix hydrolase mutant atnudt7

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Nudix hydrolase enzymes play vital role in pyridine nucleotide homeostasis by catalyzing the hydrolysis of a variety of nucleoside diphosphate derivatives including NTPs, dNTPs, NADH, NAD+, ADP-ribose etc. In the Arabidopsis genome there are 24 nudix hydrolases. Our research is focused on a cytosolic nudix hydrolase, NUDT7 (At4g12720). NUDT7 transcript and protein levels accumulate rapidly in response to biotic and abiotic stresses. Recombinant NUDT7 protein hydrolyzes NADH and ADP-ribose. We have identified a T-DNA knockout mutant of AtNUDT7 from the SALK insertion line collection. Mutant plants (nudt7) exhibit multiple pleiotropic phenotypes such as reduced size, increased resistance to pathogens, increased ROS and NADH levels. Whole-genome Affymetrix Gene Chip analysis was performed to identify the genes that were differentially expressed between the wild type and nudt7 knock out plants. In the mutant, 368 genes were more than 2-fold induced and 469 genes were more than 2-fold repressed compared with the wild-type plants, supporting the role of pyridine nucleotides as metabolic regulators of gene expression. Further analysis of the differentially expressed genes was performed using the Cluster Enrichment program. Gene ontology categories for responses to biotic stresses were up regulated in the mutant and this was phenotypically confirmed by higher resistance to bacterial pathogens in nudt7 plants compared with wildtype plants. Genes encoding several different proteases were up regulated in the mutant and was confirmed by protease activity assay using azocasein as substrate. Genes responding to water deprivation were down regulated in the mutant. Drought tolerance experiments showed that the mutant plants were comparatively more tolerant than the wild type. The genotype-phenotype analysis indicates that pyridine nucleotide homeostasis in plants plays a nodal role in regulating plant responses to environmental signals and this may be mediated via phytohormones.

Catholic Conservatism in Ten Years of Triumph: 1966-1976

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Presentation Subject Area: Social Sciences

This paper examines the ten-year publication of Triumph'a conservative Catholic journal. I will examine and explain the major themes and issues promoted by the editors and contributors. Triumph's editors, especially L. Brent Bozell, Frederick Wilhelmsen, and Michael Lawrence, shared a very traditional Catholic outlook and believed that society was in moral decay and that such a situation could be stemmed and reversed only by magnifying the spiritual truth of the Catholic Church. The editors and contributors were very critical of American society--its materialism, its secularism, its prevalent use of birth control, and its legalization of abortion. I will point out that much of their inspiration came from Spain, specifically the religious and political elements of Carlism.

Plasma concentrations of IGF-I are increased by body weight gain and bovine somatotropin in postpartum beef cows

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Presentation Subject Area: Whiteman Award Presentation

Angus x Hereford cows (2 and 3 y of age) were used to determine the effects of postpartum weight gain and treatment with bovine somatotropin (bST) on concentrations of IGF-I in plasma during early lactation.

Cows (456 ‘ 52 kg, BCS = 4.6 ‘ 0.4) were stratified based on calving date and BCS at calving, and randomly assigned to a 2 x 2 factorial: weight gain (WG), to gain either < 0.4 kg/d (M, n = 18) or ≥ 0.40 kg/d (H, n = 19); treatment with bST (250 mg; Posilac) or saline (C) on d 31 and 45 after calving. Concentrations of IGF-I, glucose and insulin were quantified in plasma collected twice a week, from d 24 until d 59 after calving. Data were analyzed using the Mixed procedure of SAS.

Before bST treatment, H had greater ($P < 0.05$) concentrations of IGF-I in plasma compared with M cows (42.3 vs. 30.6 ‘ 3.7 ng/mL). After bST treatment, there was a WG x bST x day effect ($P < 0.001$) on plasma IGF-I. Concentrations of IGF-I in plasma on d 21 were greater ($P < 0.01$) in HbST (223.1 ‘ 17.1 ng/mL) compared with MbST, MC or HC (67.0, 32.7 or 31.3 ‘ 17.1 ng/mL, respectively). After bST treatment, concentrations of glucose in plasma were greater ($P < 0.01$) in HbST compared with HC, MC and MbST (72.5 vs 68.4, 65.3 and 63.2 ‘ 1.3 mg/dL, respectively). Concentrations of insulin were greater ($P < 0.05$) in H (0.5 ‘ 0.2 ng/mL) compared with M cows (0.2 ‘ 0.2 ng/mL). Weight gain and treatment with bST did not influence the percentage of cows with luteal activity by 60 d after calving. Weights of calves at d 60 of age were greater ($P < 0.01$) in H compared with M cows (102 vs. 86 ‘ 2 kg).

Weight gain of young, lactating beef cows, influences plasma concentrations of IGF-I after treatment with bST. Further studies are needed to evaluate the effects of weight gain and bST on ovarian function and reproductive performance of lactating beef cows.

Keywords: Beef Cows, Body Weight Gain, Somatotropin.

Differential gene expression in ozone treated resistant and sensitive cultivars of Medicago truncatula.

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Ozone is a model elicitor of reactive oxygen (ROS) induced stress in plants. We treated ozone resistant and sensitive ecotypes of the model legume Medicago truncatula with 300 ppb ozone for six hours and monitored the changes in gene expression at one, six, and twelve hours into treatment utilizing microarrays. Analysis of results show that the expression profiles can drastically differ between ecotypes and sheds light on differentially expressed gene networks that may play a role in determining ozone resistance and sensitivity. Our results find that resistant ecotype JE154 appears to rapidly up regulate plant hormone pathways associated with programmed cell death containment as well as up regulate pathways potentially involved in ROS scavenging and prevention. Our data suggests that the interactions of multiple aspects may contribute to the drastic resistant phenotype seen in JE154 in response to ozone.

Grazing Preferences and Comparisons of Angus and Maine-Anjou Cattle

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Presentation Subject Area: Biological Sciences

Cattle producers are looking for new methods to improve grazing and forage crops for their livestock without increasing production costs. Previous grazing studies have focused on the harmful effects of forage to cattle. The purpose of this study was to understand grazing preferences and weight gain between two breeds of cattle (Bos taurus L.). Thirty-four Angus and Maine-Anjou breed-influenced individuals grazed in a planned grazing system. The percent cover of forage crops or plants species were surveyed from grazed (treatment) and ungrazed (control) plots over an eight-week period. Height and weight of each breed was determined before and after grazing. Grazing preferences, treatments and height and weight data were analyzed through Multi-Response Permutation Procedure (MRPP), mean and standard error figures, and 2 x 2 ANOVA's. There was a significant difference in height and weight of each breed (e.g. Angus and Maine-Anjou) before and after the experiment ($p < 0.05$; Tukey, $p < 0.05$). Although there was no statistical difference in height and weight gain between the two breeds ($p > 0.05$), a biological trend may be evident. Maine-Anjou cattle prefer the nitrogen rich plant species while the Angus prefer other species. There were significant differences in the pre- and post-grazing on plant species composition (MRPP, $p < 0.05$). The post-grazing dung yielded no significant difference in total nitrogen output between the two breeds. The latter may suggest that the Maine-Anjou are better at nitrogen assimilation than the Angus because one would expect more nitrogen output from the Maine-Anjou because of a larger intake of nitrogen rich forage.

Investigating the Effect of Alexithymia on Dreams

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Presentation Subject Area: Social Sciences

The purpose of this study was to investigate the effect alexithymia has on dreaming. Alexithymia is a condition in which individuals have trouble identifying or describing emotions, and lack or have little fantasy thought ability. The proposed hypothesis was that the higher the level of alexithymia the less frequent and meaningful the dreams. The researcher surveyed students attending a mid-size university in the Midwest. The study had 162 total volunteer participants, 28 (17.28%) were male and 134 (82.72%) were female. The majority of participants were Caucasian (66.05%) within the age range of 21-29 (69.14%). Of the participants, 5.5 % were found to be classified as alexithymic. The study utilized two research instruments: the Typical Dreams Questionnaire (TDQ; Nielsen, T. A., Zadra, A. L., Simard, V., Saucier, S., Stenstrom, P., Smith, C., & Kuiken, D., 2003) and the Toronto Alexithymia Scale (TAS-20; Bagby, R. M., Parker, J. D. A., & Taylor, G. J., 1994). A negative correlation was found between dream frequency and the alexithymic factors, this supported the suggested hypothesis.

Electronic Exchanges via Internet: Hackers in E-Commerce and E-Banking, To Trust or Not-To-Trust

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Presentation Subject Area: Physical Sciences & Technology

This study shows the effect that hackers have on an individual when it comes to trusting electronic banking and electronic commerce. Many sites claim to be secure and are able to prevent hackers from obtaining a consumer\s personal information. However, on a daily basis, there are claims made about various security breeches from well-known companies; companies who should have one of the best, if not \the best\ well secured systems available due to the massive personal information stored in their databasees. It is believed that despite all the faults found and exposed within a company\s database, some people will continue to use e-banking without ever considering whether or not it is really a secure site. However, some people are heeding the warning signs and are not risking their identity just for the convenience of making payments and banking online.

An Investigation of Periodic Points for a Family of Tent Maps

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Presentation Subject Area: Physical Science and Technology

It is known that the graph of the function $T(x) = 1 - 2[x - \frac{1}{2}]$ resembles that of a tent on the interval [0, 1]. Furthermore because T is continuous on [0, 1] and has some points of period 3, T must possess points of

every period and chaos exists in the sense of Li and Yorke. The main objective of this work is to examine the family of tent maps

$$T_a(x) = aT(x)$$

Where $0 < a \leq 1$ and $0 \leq x \leq 1$

We will show for certain values of a the function T_a does not have points of period 2 nor period 3. We then proceed to determine when these points first occur as a varies between 0 and 1, that is, we determine when period 2 and period 3 points are born. Based on our study we establish that the first periodic points born, other than fixed points, have period 2 and the last periodic points born have period 3. Many of the results use graphical analysis.

Deliberative Democracy, Quality of Life, and Sustainable Forest Management in Colombia

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Presentation Subject Area: Environmental Sciences

This research proposes to examine the application of deliberative democracy process to promote sustainable forest management (SFM) through policies that discourage deforestation and degradation, and improve local quality of life. It aims to understand the social frames that are necessary to guide analyses and conduct deliberation in forest communities.

The experimental study will examine how analysis and deliberation individually and collectively influence the decisions of local policymakers and stakeholders to manage sustainably forest resources.

The analysis and deliberation protocol will make use of a conceptual sustainability framework titled Ecoplex, which aims to investigate complex relationships in coupled human and natural systems. This framework is founded on the belief that sustainability can only be achieved through human agency (decisions and behavior), and human agency is motivated primarily by a fundamental drive toward improving quality of life. Ecoplex will be used to help stakeholders and policymakers to conceptualize resource tradeoffs while ensuring that the health of resource systems is not jeopardized.

A Comparison of Cognitive and Sensory Abilities in A Comparison of Cognitive and Sensory Abilities in Younger and Older General Aviation Pilots

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Presentation Subject Area: Social Sciences

As pilots age, they experience cognitive and sensory declines which could increase their risk for flight related problems and accidents. However, older general aviation pilots may have better overall health due to

regular evaluations, which exclude pilots demonstrating significant medical, cognitive, or sensory declines from licensure. Thus, it is possible that older licensed pilots may be similar in ability to their younger counterparts. To test this hypothesis, pilots were recruited from aviation groups around Wichita, Ks. Participants were tested on memory, far visual acuity, tactile sensitivity, and auditory thresholds. Older pilots had significantly lower scores on measures of memory, $p=.028$, tactile sensitivity, far visual acuity, $p<.001$, and auditory thresholds. The results demonstrate that older pilots do show some declines in skills and abilities potentially important to flying safety. However, further research is needed to identify whether these age-related changes increase crash risk and if older pilots are able to compensate for age-related declines.

Eliding Racism from the Colonizer to the Colonized: Chief Illiniwek as a case study in Imperialist Nostalgia, Tradition of Dishonor

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Presentation Subject Area: Humanities

Supporters of Chief Illiniwek have manufactured a deeply-felt emotional meaning for their symbol constructing a widely-resonating narrative that naturalizes it as a fundamental piece of institutional history, erases the brutal history of colonization (including the forced removal of indigenous peoples from the state of Illinois), and elides contemporary manifestations of white privilege. The sharply divided controversy surrounding the symbol, a dimension of a deeply embedded institutional racism and formulation of white privilege that is vividly evident when read through the frame of imperialist nostalgia. Imperialist nostalgia is defined as a paradox by anthropologist Renato Rosaldo where there is an 'innocent yearning' both to capture people's imagination and to conceal its complicity with often brutal domination. This country and its institutions have a long history of perpetuating various acts of overt racism against communities of color. In 2006 these oppressions still exist and are stronger than ever, and what makes them worse is that they are institutionalized. What is less evident as forms of racism and white privilege are cultural signs that possessively invest certain people in privilege (and power) by linking athletes, fans, students, and alumni through competitive athletics with university tradition. In dominant culture, as Philip Deloria has shown, there is no sign more seductive than the \Indian\ sign for people who no longer remember the crimes of their ancestors and who yearn for the humanity of a communal culture which, though technologically underdeveloped, relates to time not as a commodity, but as a place of healing and surprise. Thus, because their investment in the Indian sign simultaneously encumbers their memory and offers them a combination of guiltless pleasure and the promise of communal possibility, many people fail to see racism and privilege in the 'symbol' of their Chief. They fail to remember the history of racism that has constituted and naturalized their unearned advantages as white people and their people-of-color allies. Using an inter-disciplinary analysis that combines historical methods with discourse analysis, my research in the University Archives examines the emotional attachment to and possessive investment in the Chief symbol through an investigation of answers to a number of questions. At what moments in history and why, for instance, did white people associate their Chief with the University a tradition? In what various ways is the Chief constituted as a tradition, and what is it a tradition of? What explains why white people in particular (but also their allies) defend it and what it represents with such vigor? What do Chief supporters really mean by \compromise\? What are the alternative, pro-indigenous solutions to this issue?

Women's Zionist Organizations in San Antonio, Texas, 1941-1945

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Presentation Subject Area: Social Sciences

Though the paper discusses the formation of the major women's Zionist organizations in the United States, it is primarily concerned with the activities of Hadassah, Junior Hadassah, and the Pioneer Women's Organization in San Antonio, Texas during World War II. I have combed through the major Texas Jewish newspaper from the time period, as well as, base bulletins from San Antonio. This paper is intended to introduce listeners to the author's dissertation project, which is entitled 'Jewish Women's Religious and Secular Volunteer Organizations in San Antonio, TX, 1940-1960.'

The Role of Employee-Customer Service Relationships: Antecedents and Potential Outcomes from the Employee's Perspective

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Presentation Subject Area: Social Sciences

Relationship marketing has become the cornerstone of marketing as companies move from discrete transactions to building relationships with their customers. Within this paradigm, service employees are often required to build relationships with their clients making the employee-customer relationship an important part of overall firm interaction. Prior literature has explored how to build better relationships with customers through both the organization and employees to result in satisfaction, loyalty, and behavioral outcomes. This literature demonstrates how important it is for the employee to develop a relationship with the customer to gain loyalty, satisfaction, and trust. However, although the customer's perspective has been studied extensively, the perspective of the service employee has received less attention, especially in the development of close relationships with customers. As companies encourage employees to become close to their clients, it is important to understand the affect this has on them.

The current study explores the employee-customer relationship from the perspective of a service employee. Specifically, this study examines the construct customer commitment, which can be defined as 'a close relationship by an employee with a client that includes dedication and loyalty to that particular individual to continue the relationship indefinitely.' This construct serves as the central variable in the study which examines the potential antecedents, moderators, and outcomes in a relationship marketing framework. Potential antecedents include organizational culture, trust, and customer orientation, while potential outcomes include job satisfaction, unethical behavior, propensity to leave, and friendship. This framework will be tested in a service context with service professionals such as financial advisors. Contributions from this framework include filling an important gap in the literature as well as providing information to managers on how building relationships with clients affects their employees.

Identity and Education in *Le Gone du Chaâba* by Azouz Begag and *Georgette!* by Farida Belghoul

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Presentation Subject Area: Humanities

The literature of second-generation Maghrebi authors in France, also known as Beurs, is an emergent and steadily growing body of work. Beur literature grows increasingly complex as the body of work expands; the narratives of their childhoods and the struggle within themselves are especially telling of the many interesting facets of the Beurs' condition. This paper looks at novels by Azouz Begag and Farida Belghoul and explores common themes and differences between the two. Among the important themes is the role that education plays in assimilating the children of North African immigrants into the mainstream French population. This study attempts to address heretofore unexplored issues in French literature including identity and competing cultures. The important matters presented in these two novels are emblematic of real problems facing many demographics within France. Moreover, these issues remain at the heart of current and future European formulations of the self.

Silicon Carbide and Uranium Oxide based Composite Fuel Preparation using Polymer Infiltration and Pyrolysis

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Presentation Subject Area: Physical Sciences & Technology

Ceramic composite pellets consisting of uranium oxide, U3O8, particles in a silicon carbide matrix are fabricated using a novel processing technique based on polymer infiltration and pyrolysis (PIP). In this process, spherical particles of depleted uranium oxide, in the form of U3O8, are dispersed in liquid allylhydridopolycarbosilane (AHPCS), and subjected to pyrolysis up to 900'C under a continuous flow of ultra high purity (UHP) argon. Pyrolysis of AHPCS produces near-stoichiometric amorphous SiC at 900'C. Multiple polymer infiltration and pyrolysis (PIP) cycles are required to minimize open porosity and densify the silicon carbide matrix, in order to enhance the mechanical strength of the material. Structural characterization is carried out after first pyrolysis to investigate chemical interaction between U3O8 and SiC. The physical and mechanical properties are also quantified, and it is shown that this processing scheme promotes uniform distribution of uranium fuel source along with a high ceramic yield of the parent matrix. Furthermore, the processing technique involves lower energy requirements than conventional sintering processes currently in practice.

Effect of Mechanical Loading and Environmental Degradation on Carbon Fiber Reinforced Composites

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Presentation Subject Area: Physical Sciences & Technology

Special fixtures have been designed and fabricated to permit controlled fatigue and static, tensile and compressive, loading of composite specimens that are concurrently exposed to a combination of ultraviolet radiation and water condensation. The fatigue and static load testers are capable of four-point bend loading of composite specimens with a nominal size of 150 x 12.5 x 1.27 mm. Specimens are subjected to displacement controlled conditions with a stroke of 12.7 mm. The loading frequency for the fatigue tester is ~0.16 Hz. This loading frequency allows for 430,000 cycles in one month of exposure. Typically, it is not possible to provide mechanical fatigue of materials inside commercially available environmental chambers. Thus, these special fixtures allows for good simulation of real-world multiple-environment degradation. Since the objective is to establish possible interactions between different degradation mechanisms, the UV/condensation exposure environments and fatigue loading have been applied both independently and in conjunction with each other. Weight loss and residual strength experiments indicate that unique synergistic mechanisms exist that lead to greatly enhanced material degradation in the presence of multiple environments.

Using GIS to Assess the Spatial Equity of Community Parks in the Oklahoma City Metropolitan Area

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Presentation Subject Area: Minority Issues

Quality of life is improved by making an area more attractive and livable. Urban amenities project an image of livability for a city. Among the amenities provided by local governments, parks are among the most visible and most highly critiqued. Numbers of parks, size and quality, are potential nature amenities for which cities strive to boast. However, answering the demand for an improved quality of life means questioning whether the amenities offered by a city are distributed equitably among its citizens. The purpose of this study was to use GIS (Geographic Information System) technology to assess the spatial equity of park distribution in the Oklahoma City metropolitan area. That is, are parks in the Oklahoma City area distributed equitably among its residents?

In an analysis of amenity distribution, one must distinguish between equality and equity. While equality is equal access for all groups of people, equity is the concept that those who require more of a service have proportionally more access to it. Defining equity as the provision of a service in proportion to need, this study measures the accessibility of community parks for 'need' groups, minorities and lower-incomes. Applying various distance measures and local spatial autocorrelation statistics, the results were compared to the socioeconomic traits throughout the Oklahoma City metropolitan area at the census block group level. Community parks were found to be distributed equitably among the lower income groups and the Hispanic population, but the black population was shown to have a lack adequate access. Explanations for the equitable distribution are given and recommendations are made to improve the accessibility to community parks for the black population.

A Quantitative Study of VOC Concentration Levels on a Selected College Campus

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A Yeast 2-Hybrid System Analysis of Dictyostelium G Protein and MAP Kinase Interactions

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G protein-coupled receptors allow eukaryotic cells to detect and respond to external signals such as folate and cAMP in order to regulate many functions of the cell, including metabolism, cell growth and differentiation, and cell movement. The eukaryotic amoeba *Dictyostelium discoidium* is an independent unicellular organism that will aggregate and exhibit multicellular characteristics when in an adverse environment such as starvation. The *Dictyostelium* Gα4 G protein subunit mediates activation of the MAP kinase Erk2 when cells are stimulated by folate, resulting in the development of spore cells during the *Dictyostelium* multicellular life cycle. In contrast, Gα5 inhibits responses to folate and promotes stalk cell formation rather than spore cells. The Gα4 and Gα5 subunits are the two most closely related subunits based on sequence comparison, yet they provide opposite functions. The Gα5 subunit contains a putative docking site for MAP kinases not found in the Gα4 subunit suggesting that MAP kinase interactions might be important for Gα4 and Gα5 subunit functions. To examine potential interactions between Gα subunits and the *Dictyostelium* MAP kinase Erk2, the genes coding for the Gα subunits were fused with the DNA-binding domain of the yeast Gal4 gene while the gene coding for Erk2 was fused with the transcriptional activation domain of Gal4. These gene fusions are being expressed in a yeast 2-hybrid system that expresses the reporter gene lac Z in response to the interaction of the gene fusion products.

Child's Medical Suppport Garment Prototype

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Presentation Subject Area: Social Sciences

The purpose of this study was to develop a supportive and compressive undergarment for a 27 month-old male with a large omphalocele that contained his liver, small intestines, and a portion of his large intestines. The omphalocele (O) was covered with alloderm underneath (a simulated skin product by LifeCell) and skin grafts. The goal is to gain abdominal cavity space for eventual closure of the omphalocele. It was imperative that the omphalocele be centered over the abdominal cavity and compressed to gain space. Specific dimensions and extent of the birth defect were documented and photographed. The first source of information was the parents themselves. The parents provided insights, photographs, and samples of garments used in the attempt to support and compress the omphalocele. Since the child's birth the parents were instructed by the child's medical staff to use an elastomeric fabric undergarment to help hold the

omphalocele in a position as close as possible to the natural position. Over the past 2 years the parents have tried a variety of products attempting to maintain the correct placement of the protrusion. One product, designed for newborns with this deformity, consisted of multiple pieces of fabric held together by several strips of hook and loop tape, making dressing and diaper changing a lengthy process. By 27 months this toddler was standing and walking independently with an omphalocele that had a circumference of 43 cm. and resembled a small football. At this stage of development, gravity becomes an adversary and causes the omphalocele to lengthen and distend. Therefore, there was a serious need to design a garment to lift and support the omphalocele to help maintain the desired medical placement regardless of the child's mobility. Fabrication for the garments needed to include elastomeric characteristics for lifting and supporting. Also the fabrics that were next to the skin needed to have a soft, comfortable and, as most of these children and sensitive skin due to skin grafts or skin replacement therapy of some kind. Moisture transference properties were desirable to keep the child's skin dry and prevent chapping. In the endeavor to develop specifications for the support garment, the fourth step in the design process, a child's 3-D dress form was used to replicate the child's body. Modifications were made to the form to incorporate a protrusion over that form to replicate the omphalocele defect. Photographs and measurement of the child provided data for verification of the simulated omphalocele. Flat pattern and draping techniques were both used to develop the garment and to assure proper fit. The prototype was fabricated and tried on the child by the parents in the presence of the researchers and physician to make sure that the system properly supported the omphalocele. Some minor changes in the prototype were made based on the evaluation and 2 prototypes were constructed and delivered to the family. Future prototype develop is anticipated to accommodate changes in the child's physical dimensions.

Geographical Evolution of Madras, India

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Presentation Subject Area: Social Sciences

Madras (now Chennai), established in 1639, serves as an ideal example of India's cultural transformation from traditionally rural into a modern society. A blend of Tamil culture and British colonial influence has produced a bustling metropolis of over six million residents. The city originally evolved from an assortment of agrarian villages and worker communities that served various functions to aid Fort St. George, one of the main British ports on the Indian Ocean. Spatial expansion of Madras, however, followed a caste-based cultural system, supported by the British, rather than through an adequate planning or rationally organized economic factors. The evolution of Madras, therefore, across a two hundred year period in context to the cultural factors aiding and limiting its development is presented. Brief comparisons are drawn in relation to other Indian cities, which have followed similar evolutionary trends, to better understand the evolving character of large urban areas of South Asia as well as their current development and future development in the light of India's rapid urbanization.

Generation of slip pulses during frictional sliding between PMMA plates

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Presentation Subject Area: Physical Sciences & Technology

We present the results of an experimental investigation on friction dynamics by sliding two Plexiglas plates against each other. An in-house designed and built friction testing fixture is used to apply a constant compressive load with a linear actuator pushing the bottom plate at a constant displacement rate causing it to slide against the fixed top plate. The normal and the tangential loads from the respective load cells are continuously acquired at the rate of 2 kS/s. Optical diagnostic techniques of Coherent Gradient Sensing (CGS) and photoelasticity were utilized to visualize the stress fields at the interface. Two distinct events are observed: the commonly observed macro stick-slip event of the plates at frequencies around one Hz and regions of partial slip at higher frequencies. Consequently, relative plate motion develops as a result of partial slip regions propagating across the interface. These partial slip regions can either be slip pulses or expanding slip regions. The existence and progress of these slip pulses is investigated as a function of compressive load.

Keywords: Friction, PMMA, Stick-Slip, Slip Pulses, Coherent Gradient Sensing technique

Divided Highways: The Duality of Roadside Memorials

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Presentation Subject Area: Social Sciences

This paper explores the phenomena of roadside memorials as dual landscapes seen through the eyes of the observer. Physical traits inherent to rural and urban environments interact with the cultural upbringings of the observer to create unique perspectives. The preliminary research has identified sites in northern Utah with strong cultural ties to Mormonism and a strong dichotomy in urban and rural landscapes. The use of interviews and surveys develop connections between how and where sites are situated and how they are precieved. A complete picture of the landscape will reveal the reasoning behind why we view our environments the way we do.

Expectations of the Duration and Effectiveness of Psychotherapy: A Delay Discounting Perspective

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Presentation Subject Area: Social Sciences

The dose-effect literature indicates that between 8 and 15 sessions of psychotherapy are needed in order to obtain a 50% client recovery rate (Hansen, Lambert, & Forman, 2002; Howard, Kopta, Krause, & Orlinsky, 1986). However, data on the observed duration of psychotherapy indicates that the average length of treatment is 5 sessions with a median of 3 session (Hansen et al., 2002) and that 60% of clients discontinue

treatment before the 10th session (Garfield, 1994). This phenomenon, known as premature termination or termination before the expected results have occurred, is a major problem seen in clinical practice. One factor thought to be involved in the problem of premature termination is unmet client expectations (Garfield). The literature does indicate that when clients are asked about their expected treatment duration, over 74% expect to attend 10 or fewer sessions of treatment (Pekarik, 1991). These findings are valuable in understanding the role that expectations regarding treatment duration play in premature termination from psychotherapy. However, directly asking clients how many sessions they expect to attend may not be the best way to assess expected treatment duration due to its failure to take into account expected treatment effectiveness in terms of recovery rate. This study assesses expected treatment duration while taking expected treatment effectiveness, in terms of rate of recovery, into account by using a delay discounting model. In this model participants are asked to indicate their preferences on a number of choices that fit the question format of 'Would you prefer a treatment that is 15% effective after 1 therapy session (15% of clients that receive this treatment recover after one session of therapy) or a treatment that is 50% effective after 8 therapy sessions (50% of clients that receive this treatment recover after 8 sessions of therapy)' with altering rate of recovery percents. Preliminary data from 115 participants indicates that an 8 session treatment is expected by potential clients to have a 62% recovery rate and a 15 session treatment is expected to have a 72% recovery rate. Both of these recovery rates are significantly different from the 50% recovery rates at 8 and 15 sessions indicated by the dose-effect literature ($p < .001$ at both points). When comparing participant expectations to Howard et al.'s dose-effect curve, results show a similar shaped curve for expectations (a positive negatively accelerated curve); however, participant's expectations for the recovery rate are significantly higher at each of the session points. Results of this data will be discussed in relation to treatment expectations and premature termination.

U.S. Perspectives on Attributions of Third World Poverty: A Study of the Effects of Education in Social Stratification

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Presentation Subject Area: Social Sciences

According to the current literature, attributions of poverty are divided individual and structural causes. Studies have found that individuals that are wealthy or middle-class, Christian-Protestant, conservative, and/or from first world countries, are more likely to be associated with individualist beliefs about the causes of poverty; in contrast, individuals that are poor, Catholic or non-Christian, liberal, and/or from third world countries tend to attribute structural causes to poverty (Feagin 1972, 1975; Kluegel 1987; Campbell 2001; Abouchedid and Nasser 2001; Furnham 1982). This literature has been complemented by studies of the correlation between people's attributions of poverty that show that individuals associated with structural attributions of poverty are more likely to donate than those that attribute individualist causes to poverty (Cheung and Chang 2000). The current study is an attempt to measure the possible changes of attributions of poverty in an educational setting to determine if a shift can be made (from individualist to structural attributions) in the opinions of individuals and if this shift in turn changes the donating behaviors of such individuals. This study involves the participation of students who take Social Stratification (SOC 4383) and includes a control group of students at the same approximate level of college courses and are enrolled in the Research Methods class (SOC 4133) at Oklahoma State University. The study is being executed by the administration of a pre-test post-test survey, which asks information about personal attributions of third world poverty and intentions to donate to international relief organizations. The results of the pre-test will be analyzed to determine the general attributions of participants, and to measure whether the opinions of both classes are similar. In addition, analysis will be done on donating behaviors and their correlation to

attributions (individual or structural). At the end of the semester, data will be collected in the post-test survey to determine if attributions in the Social Stratification course have shifted to more structural causes, and if so, if donating behavior consequently increases as a result.

Value Engineering Model for Construction Projects using CYCLONE Simulation

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The utilization of value engineering (VE) in construction project has proven to be helpful to improve the effectiveness of the project. Many different kinds of value engineering models have been developed and used in real construction projects but one thing in common is they all depend on highly qualitative decision making process such as expert's judgment. The subjective estimation of productivity, cost, and schedule in assessing the value of alternatives may lead to a biased final decision. This study proposes an advanced five-phase VE model with step-by-step algorithm. A construction simulation technique (CYCLONE) is used as a mean to minimize subjectivity in estimating the value of different alternatives in the development phase. This new approach provides more accurate, realistic and quantifiable information on productivity, cost, and schedule of competing alternatives for better decision making by the stakeholders of the project. The proposed model is applied and evaluated using a real hospital building construction project in Kyungki-Do, South Korea.

Keywords: value engineering (VE), construction simulation, CYCLONE.

Environmental Sociology Factors Affecting Sustainability & Urban Planning in Vancouver and How Vancouver\s Social Processes Can be Applied to Tulsa

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Vancouver's urban planning situation is analyzed through three sets of environmental sociological factors: historical facts, biophysical characteristics, and social and economic conditions. Of these factors, special attention is given to the economic development model referred to as Vancouverism and the social process model known as an iterative community process. Also discussed how these factors, solutions, and processes can provide insight to the formation of the new Tulsa Comprehensive Plan in 2007. The conclusion will explain the case study dynamics by relating academic theories about the interdisciplinary nature of sustainable urban planning and the social process Vanvouver used to create a more sustainable city.

Presenter from Texas Southern University

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Prolonged exposure to stressful conditions can literally erode human life. Research substantiates that psychosocial stressors are directly linked to the decomposition of physical and mental health. Stressful conditions significantly contribute to the worsening of coronary heart disease, cancer, immune system disorders, hormonal disorders, diabetes, weight gain, gastrointestinal disorders, mood disorders, anxiety disorders and behavioral adjustment disorders.

Stress is any construct that threatens or impacts the well being of an individual's physical and mental health. Existing under aversive environmental circumstances such as poverty, violence, crime, abuse, separation, racism, and death is stressful. Also stressful conditions can be heightening especially when they happen unexpectedly like in the case of a natural disaster or catastrophe.

On August 29, 2005 thousands of people began feeling stress caused by hurricane Katrina. A considerable number of these victims were residents of the Lower Ninth Ward of New Orleans, Louisiana. They were mostly African Americans who lived in the lower socio-economic strata of the city.

It is estimated that more than 150 thousand people evacuated New Orleans and relocated to Houston, Texas. These individuals had to leave their homes, possessions, pets, money and even family members. They became dependent upon Houstonians for their survival. People from New Orleans as well as those from Houston had to make adjustments to different living arrangements. However, the youngsters attending Houston's public schools endured the greatest impact of change.

This study investigates the psychological and social implications experienced by high school student evacuees from New Orleans who were displaced as a result of hurricane Katrina. A stress assessment questionnaire was administered to students as part of their participation in adjustment focus groups. The results provided a descriptive analysis of the stress associated with their adjustment and life style changes.

Understanding the Sociopolitical Context of Remediation Technology Acceptance: A Case Study of the Tar Creek (Oklahoma) Superfund Site

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Five qualitative and quantitative techniques were utilized to test stakeholder acceptance of a proposed remediation technology at the Tar Creek Superfund site: Q methodology, frame analysis, content analysis, trust assessment, and knowledge assessment. Results were validated with a random sample mail survey. When combined into an integrated methodology, these techniques revealed a rich understanding of stakeholder perspectives and frames and how they serve as prisms that focus and highlight concerns and attitudes regarding proposed remediation technologies.

We find that stakeholders judge technologies in a larger context that includes government and social trust, decision-making participation preferences, conflicting goals, and organizational alliances. Our study also

highlights the importance of 'framing wars' and temporal changes in context that result from policymaker actions, media coverage, and grassroots activism.

Four factors significantly influence stakeholder's views of remediation and pollution control technologies: (1) context in which the technology is being considered, (2) stakeholders' views on the positive and negatives impacts of deploying the technology, (3) stakeholders' trust of various groups of policy actors, and (4) stakeholders' knowledge about extant risk, ability of a technology to mitigate risk, and risk posed by the technology itself. Each of these four components may be influenced by the others, creating a dynamic framework of stakeholder acceptance that may change over time and in response to new information. An assessment of these four factors can inform judgments about the acceptability of remediation technologies and enhance their acceptance if authorities respond to stakeholder concerns in a way that benefits both the decision process and decision outcomes.

Simultaneous Inference in GLM Settings

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Generalized Linear Models (GLM) have a broad range of application in many fields of research. Often, when GLMs are estimated, particular quantities estimated from the model are of primary interest. Such quantities of interest may be response probabilities, odds ratios, or relative risks, among others, and are typically estimated using confidence intervals from the estimated model. In many cases, individual estimation of these quantities via confidence intervals is appropriate. However, whenever overall conclusions about the group of estimated quantities wish to be made, a procedure that limits the overall type I error is advisable. Few sophisticated methods exist that simultaneously estimate quantities for GLMs, particularly for small to moderate sample sizes. Thus, several methods to better estimate these quantities from GLMs at small to moderate sample sizes without inflating the type I error rate are investigated and the simulation results are presented.

A Descriptive/Comparative Analysis of the Role of Content Area Literacy Methods in Mainstream and Special Education

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Presentation Subject Area: Education

This study provides a preliminary and introductory-level descriptive/comparative analysis of issues related to how content area literacy is dealt with for students with special needs. The purpose of the study was to gain insight into how the established fields of content area literacy (CAL) and special education might intersect with each other in meeting the needs of secondary students with learning disabilities (LD). This effort was undertaken through a review of the literature and interviews with educational experts and practitioners in reading and special education. The findings of this study suggest the following: 1) For a number of reasons, including three prominent federal legislative actions over the past 30 years, students with LD are being more and more integrated into mainstreamed content area classes, making CAL for students

with learning disabilities a topic of keen concern and value for both content area teachers and special education professionals. 2) Problems with reading/literacy are frequently part of the challenges that students with learning disabilities face. 3) A fair amount of CAL teaching/learning strategies are already established in the content area instruction and the special education fields. As efforts at improving the performance of all students (including those with learning disabilities) are accelerating, there is an increasing understanding of the need to integrate research-based CAL approaches into classrooms educating students with special needs. This kind of reform may be contributing to a merger between the disciplines of general and special education, reshaping traditional instruction from a 'two box' to a 'one box' system.

Comparative Analysis of Biomarker Expression in Early Onset Breast Cancer

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Breast cancer is the second leading cause of cancer deaths among U.S. women, and the incidence of breast cancer is highest overall in Caucasian women. However, the incidence of early-onset breast cancer is comparatively higher among African-American women. This trend has been observed in Alabama where the relative risk of breast cancer in young African-American women is twice that observed in Caucasians. Tumor profiles also differ between the groups; African-Americans have higher tumor grades, higher Her-2/neu expression, and lower ER/PR expression compared to Caucasians. The purpose of this study was to analyze biomarker expression in Alabama early-onset breast cancer patients. Because African-American breast tumors are reported to be more aggressive than Caucasian breast tumors, we hypothesize that the expression profile of several prognostic indicators will correlate with ethnicity. Tumor samples and clinical report data (tumor grade, ER/PR and Her-2 status) were collected. Levels of p27 were determined using standard immunohistochemistry. Overall, Caucasian breast tumors contained a higher percentage of cells expressing p27 than African-American breast tumors (47'2.3% vs. 22'9.5%). We expect a higher proportion of tumors from African-Americans to express high levels of p53 and Her-2/neu and low levels of p27 and ER/PR, indicative of a poor prognosis. Data supportive of our hypothesis may provide a better understanding of early onset breast cancer African-Americans and may inform more tailored therapeutic options.

Boundaries of Change: The Enclosed Landscape of the Choctaw Nation, Indian Territory

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The Choctaws settled the southeastern portion of what is now Oklahoma during the early- to mid-1830s as a result of the federal policy of Indian Removal. Soon after arriving the Choctaws began recreating with considerable success their government, developed a strong educational system, and repeated their successful farming practices until the destruction brought about by the Civil War. The residents of the postbellum Choctaw Nation began rebuilding these institutions a second time while simultaneously contending with the

large scale influx of Anglos, the emancipation of slaves, and construction of railroads'all of which dramatically altered land use practices. Although scholars have given considerable attention to the political and economic history of the Choctaw Nation, very little work exists on its historical geography, particularly the material culture which provides diagnostic clues for investigating settlement patterns and human-environment interaction. This lack of attention comes despite the meticulous surveys conducted in the nation by the General Land Office in conjunction with the United States Geological Survey from 1894 to 1898 in preparation for allotment in severalty. These surveys offer the oldest, most detailed look at the historical cultural landscape of the Choctaw Nation. This research presents the reconstruction of the physical and cultural geography of the Choctaw Nation'primarily through public land survey plats and field notes'on the eve of allotment. It shows the relationships of natural resources, transportation, industry, and terrain to settlement using fence construction as an index, addresses the changing nature of agricultural land use, and poses the question of the degree to which cultural preferences prevailed.

Analysis of web journal content posted by adolescents attending public and Catholic schools: Implications for future research and intervention

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This study examined complex adolescent behaviors observed via web journals (blogs). Although adolescent 'blogging' has soared in popularity in recent years, very little research has been done in terms of a comprehensive analysis of blog communication and interaction among adolescents. Content was qualitatively coded from a random selection of 100 blogs authored by adolescents attending public or Catholic high school. Viewed as an authentic outlet for behavior, blog analysis by school-type provides social contexts for online behaviors. Thematic elements were identified including family and social issues, risk behaviors, identity vulnerability, and frequency of interaction. Results indicated adolescent blogs frequently include appropriate images, positive comments about parents and peers, discussion of athletics, risk behaviors, and profanity. More research is needed on specific blog topics related to adolescent risk and disclosure as well as parental monitoring and intervention.

A dynamic systems analysis of adult attachment styles, negative affect, and flexibility in real time marital interaction.

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Presentation Subject Area: Social Sciences

For some time researchers and clinicians have sought to analyze and explain the processes of marital interaction. Attachment theory is a framework fit for explaining these processes. Attachment theory posits that individuals form internal working models based on interactions with caregivers. These working models not only influence infant-caregiver relationships, working models also influence intimate relationships throughout adult life. Based on working models, individuals are identified as having a secure or insecure style of attachment characterized by unique affective and behavioral strategies. The purpose of this study is

to understand how specific attachment styles have influenced the use of negative affect and the flexibility of couple's in martial interaction processes.

Negative affect has been referred to by many as a key discriminator of relationship quality, suggesting that the affect with which one communicates tends to be a reliable means of distinguishing between distressed and nondistressed couples. We hypothesize that couples with at least one insecure partner will spend more time in negative affect and visit negative affect more frequently than couples with two securely attached partners. In addition, early studies of marital interaction have noted that flexibility and rigidity are characteristics of the interactions of nondistressed and distressed couples, respectively. These studies highlighted a couple's need for flexibility in interaction to prevent rigid patterns from becoming dominant absorbing states. Absorbing states are the patterns of rigidity where couples become inflexible. We hypothesize that couples where one partner is insecure will be less flexible than couples with two securely attached partners. Couples who are more flexible tend to be less predictable- and more satisfied- while those who are more rigid are more predictable and less able to exit negative interaction patterns. In this sense, negativity has been referred to as an absorbing state, which when entered, is difficult to exit. We hypothesize that negativity will be an absorbing state for couples with insecurely attached partners, wherein they will be less flexible during their negative interactions, and more flexible during positive interaction.

Dynamic systems theory has provided a means for us to explain attachment and analyze interactional processes in complex systems. Dynamic systems theory holds that self-organization is the tendency to choose and repeatedly employ certain attractors in the state space of the system. As the system grows more complex, so does the rigidity of the systems self-organization. However, according to dynamic systems theory perturbations of the system can influence change in the systems self-organization. Through the perturbation of positive affect, this study will explore how attachment styles influence a couple's ability to self-organize in a state of positive affect. We hypothesize that couples with at least one insecure partner will have more difficulty self-organizing in a state of positive affect than couples with two securely attached partners. This study will use the dynamic systems method of state space grid analysis to visually capture and empirically represent the affective interactions of couples discussing difficult issues. State space grid analyses have provided researchers with a new method for exploring interactional time series data.

A Quantitative and Qualitative Analysis of 3 Different Recovery Methods of the Virus PRD-1 On Surfaces of Various Fomites

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Socioeconomic Implications of the Oil and Gas Industry in Coastal Louisiana and Disaster Recovery in the Wake of Hurricanes Katrina and Rita

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The oil and gas industry has had an incredible impact on the state of Louisiana throughout the twentieth century. Its boom and bust nature directly contributed to Louisiana\s economic heyday of the early 1980s as well as the deep recession the state suffered in the latter half of the decade into the 1990s. These cycles have had far-reaching effects on Louisiana\s social institutions as well as the coastal environment itself. Although deep water OCS exploration has increased crude output within the Gulf of Mexico, overall production peaked in the 1970s and has been declining steadily ever since (MMS, 2004). Since the 1980s, employment in the petroleum industry has been decreasing as part of a general downward trend. Fewer jobs are being created due to new technological innovations that combine increased efficiency with the need for less manpower (Tobin, 2000). The importance of the oil and gas industry to the state\s social fabric must be taken into account during the rebuilding and recovery efforts in the devastating aftermath of 2005 Hurricanes Katrina and Rita. Louisiana coastal zone communities are largely working class. Existing literature on disaster recovery shows that the poor and working classes are frequently among the most vulnerable in a disaster as well as those least able to recover from its effects (Fothergill & Peek, 2004; Cutter & Emrich, 2006). By analyzing the history of the petroleum industry in Louisiana, the socioeconomic effects of extractive economies on coastal communities, and existing literature on disasters, we can better understand where to direct efforts in order for coastal Louisiana communities to rebuild.

The Corrective Correlative: Restorative and Subversive Will in Shakespeare's Pericles, Prince of Tyre

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Recently Shakespeare scholars have turned a new critical eye toward some of the Bard’s less known plays. Most notable of these plays is a now discarded romance that had a profound effect upon Elizbethan audiences. Having characteristics of a romance play and a morality play, Shakespeare’s Pericles, Price of Tyre transcends both categories by engendering a host of ethical interpretations all revolving around the dynamics of volitional power. Centering Pericles on the importance of human will in relation to moral acts, Shakespeare creates a barrage of characters that exude a multitude of either conscious or unconscious

attitudes toward the norms of morality within the narrative. The thoughts and actions of the central characters represent a stark portrayal of the will's agency in moral acts, thereby creating a nexus of behavioral significance. While John Gower serves as the vinculum of this otherwise dissonant romance, Marina indubitably acts as the ligature of ethicality. The sheer turbulence of the play, with sweeping tempests and desperate wanderings, does not immediately allow an overtly moral message to germinate. A close analysis of the textual layout, however, yields many indications of the play's overall scope and clearly shows an underlying moral depth that is part of Shakespeare's general theatrical purview. As this paper will show, Marina provides the essential key to understanding the importance of will to the play as a whole. Moreover, this paper will attempt to explain some of the interesting history behind the play as whole, including its presence in a Jesuit mission house and its popularity with foreign heads of state in the early seventeenth century.

The moral dimensions of the play rest upon the pillars of two potent scenes and their circumjacent events: Pericles' confrontation with Antiochus in Act I and Marina's confrontation with the managers of the brothel in Act IV. Both parts of the play present peculiar instances of will, one aggressive and overt, the other passive and subtle. Despite a seeming imbalance of structure that calls into question Shakespeare's contribution to the play, Pericles stands as a dramatic whole with the two scenes generating the play's moral profundity and didactic fecundity. In juxtaposing perverted and reprobate characters with the pious persona of Marina, Shakespeare brings the absolute importance of human will to the forefront of the play's dramatic effect.

Dual-spectral band continuous-wave endoscopic near-infrared optical tomography for hemoglobin and oxygen saturation imaging

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Endoscopic near-infrared (NIR) optical tomography is a novel technique that allows the measurement of blood-based intrinsic optical contrast to be achieved for cancer detection in internal organs. Implementing dual-spectral detection to endoscopic NIR tomography is necessary to assess the hemoglobin concentration and oxygenation levels in internal organs. This work introduces a dual-spectral band endoscopic NIR tomography system that uses superluminescent diodes (SLD). Two SLDs having 14nm bandwidth centered at 780nm and 830nm were used as the source. The collimated beams from two SLDs are launched onto a grating at different incident angles such that the diffraction angles are identical. The overlapped linear dispersion of the source spectra is then collimated and coupled to a linear fiber bundle, to create a spread-spectral-encoding of each wavelength band onto the array of fibers, allowing parallel delivery of a separate pair of wavelengths into each fiber of the endoscopic NIR probe. The source fibers and detector fibers in the probe are arranged in a circular array for transverse imaging by use of a cone prism for 90 degree light deflection. The detected light is decoded by a spectrometer, and the dual-band signals corresponding to all source-detector channels are acquired simultaneously using a CCD camera for tomographic reconstruction of absorption contrast in both spectral bands. The system design, instrumentation, and calibration will be presented, and preliminary phantom-based imaging results are demonstrated.

A simple approach of modifying the source illumination in near-infrared diffuse optical tomography for shallow target detection

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Presentation Subject Area: Biomedical Sciences

Near-infrared diffuse optical tomography is a non-invasive functional imaging modality that detects the tissue absorption and scattering heterogeneities in a depth at the order of centimeters. The previous implementation of NIR diffuse optical tomography has been confined to using external applicator arrays for imaging of breast, brain, etc., where the interrogation of deep tissue volumes by diffuse photon propagation could be accurately modeled by the diffusion approximation of radiative transport equation. Recently, the NIR diffuse optical tomography has been employed for the imaging of internal organs like prostate, where the unique endoscopic-imaging geometry and the need of detecting shallow target indicate a modified diffusion approximation. In this work, we introduce a simple approach, where by introducing an isotropic source beam at the tissue boundary instead of a conventional pencil-beam illumination, the shallow target detection guided by diffusion approximation may be improved. Analytical solution and computer simulation will be presented to demonstrate the feasibility of this approach.

Instrument Development in the Study of Self-Directed Learning for Volunteer Firefighters

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This session describes steps taken to develop and pilot test an assessment instrument designed to measure self-directed learning of a national sample of volunteer firefighters. Assumptions of this study follow the theory of Self-directed Learning, namely that individuals engage in SDL for practical reasons they can apply to their lives immediately. Individuals engage in SDL when the subject to be studied relateds closely to something important in their lives. The national assessment project relateds to firefighter health and safety and is intended to help firefighters reduce the level of injuries and fatalities related to their work.

Nonlinear Adaptive Wavelet Analysis of EKG Signal

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Wavelet representation can provide an effective time-frequency analysis for non-stationary signals, such as EKG signals, which contain both steady and transient parts. In the recent years wavelet representation has emerged as a powerful time-frequency tool for the analysis and measurement of EKG signals. The EKG

signals contain recurring, near-periodic patterns of P, QRS, T, and U waveforms, each of which can have multiple manifestations. Identification and extraction of a compact set of features from these patterns is critical for effective detection and diagnosis of various ailments. This paper presents an approach to extract a fiducial pattern of EKG based on the consideration of the underlying nonlinear dynamics. The pattern, roughly, is an eigenfunction of ensembles created from a Poincare section of EKG dynamics. The adaptation of wavelet functions to the fiducial pattern thus extracted yields two orders of magnitude (some 95%) more compact representation (measured in terms of Shannon signal entropy). Such a compact representation can facilitate the extraction of features that are less sensitive to extraneous noise and other variations. The adaptive wavelet can also lead to more efficient algorithms for beat detection and QRS cancellation, as well as for the extraction of multiple classical EKG signal events, such as widths of QRS complex, QT interval, etc.

Subcellular Distribution and Induction of Apoptosis of CdTe Nanoparticles in Human Hepatoma HepG2 Cells

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The subcellular distribution of CdTe nanoparticles and their ability to induce apoptosis in HepG2 cells were investigated. Treatment of cells with CdTe nanoparticles (6 nm or 2 nm, 5 ‘M final concentration) for 1 hour or 24 hours led to differential subcellular localization visualized by confocal microscopy. The smaller sized particle mainly localized near the nuclear region while the larger sized particles predominately distributed in either plasma membrane or cytoplasm in a time-dependent manner. To examine the possible induction of apoptosis by CdTe nanoparticles (6 nm), morphological changes in Hoechst stained cells were evaluated using fluorescence microscopy. Nuclear condensation appeared in cells treated with CdTe nanoparticles. In addition, DNA fragmentation was noted after 48 hour incubation with CdTe nanoparticles. Dose- and time-related increases in caspase 3/7 activity following nanoparticle exposure supported the induction of apoptosis. In summary, subcellular localization of CdTe nanoparticles is size- and time- dependent, and CdTe nanoparticles can elicit cytotoxicity through apoptosis in HepG2 cells.

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Modulus and Hardness of Nanocrystalline Silicon Carbide as Functions of Grain Size

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This experimental investigation reports on the mechanical properties of nanocrystalline silicon carbide as a function of the crystallite size. Monolithic SiC samples are fabricated by controlled The degree of crystallization, and the resulting grain size, is controlled by varying the processing conditions. Subsequently, the modulus and hardness are determined using instrumented indentation. Meanwhile the microstructure is

characterized using X-ray diffraction. The process yields grain sizes in the range of 0-12 nm. It is seen that the presence of nanocrystalline domains in amorphous SiC significantly influences the modulusand hardness. A non-linear relationship is observed with optimal mechanical properties for a grain size of 3.5 nm.