Course Description: Time is often referred to as “the tacit dimension” within psychology because unlike other types of perception, it is not directly available to any sensory organ but can only be apprehended through change and the dynamic flow of environmental events. And yet despite its ephemeral nature, time is a dimension that has a significant impact upon a wide variety of psychological behavior. The intent of this course is to examine some of the ways in which this occurs.

From a structural perspective, it can be demonstrated that events in the world around us display a high degree of temporal organization at all levels of analysis. Many of the body’s physiological processes are entrained to the circadian day-night cycle and the pattern of sleep/wakefulness which, in turn, influences many behaviors and our overall level of functioning. In addition, many of the events we frequently encounter display a spatial array that is structured in and over time. Music, speech, body movements, and walking gaits are among the many events in which the sequence of notes, words, or actions unfold with a characteristic rhythm and tempo over a given time span. This particular arrangement not only influences how an event is perceived and remembered, but also the overall accuracy with which the event’s velocity and total duration are subsequently judged. Beyond this more micro-level, temporal patterning can also be identified within more global and social frameworks of life. The types of activities we perform in everyday existence vary in cyclic patterns over the course of a day, week, and year and thereby provide a scheduling scheme that serves to coordinate subpopulations of individuals. Different cultures have different conceptualizations of time which can be reflected in the types of metaphors used to describe time as well as the overall pace of life.

Another dimension which exerts a major influence upon everyday behavior is temporal perspective and one’s relative orientation toward the past, present, and future. Many clinical psychologists argue that this orientation is central to one’s mental well-being and the degree of ego strength displayed in coping with life’s difficulties. Indeed, it has been found that disturbances in temporal perspective are correlated with both delinquent and criminal behavior and certain forms of mental illness.

Lastly, the neural substrates of different types of temporal behavior will be examined. In general, the mechanisms mediating circadian-driven behaviors are quite different from those governing the internal clock and sensitivity to an event’s duration and overall velocity. This is perhaps most apparent in the analysis of timing disorders due to certain diseases and brain trauma that affect certain areas of the cerebral cortex.

Grading:

- Classroom Participation and Discussion: 10%
- Exam I: 25%
- Class Presentation: 15%
- Exam II: 25%
- Final Paper: 25%
Lecture Outline

I. Overview

a. Various manifestations of psychological time
b. Brief history of time-keeping - psychological impact of clocks

Readings:


II. Rhythm

a. Chronobiology: Circadian and biological rhythms
   1. rhythmicities of sleep – different stages, why do we need it?
   2. studies of time isolation: free running rhythms and zeitgebers
   3. chronotypes: larks vs. owls
   4. neural basis of biological clock
   5. practical applications of circadian research
      - jet lag
      - workers’ shifts
      - medicine and pharmacology
      - cyclic variations in suicide
      - sleep disorders
      - SAD
b. Rhythm in Environmental Events: Basic principles of rhythmic organization and production
   1. grouping rules
   2. accents
   3. biases in rhythm perception
   4. modality differences
   c. An example of rhythmic organization within environmental events:
      1. locomotion and walking gaits; biological motion
   d. Some cognitive functions of rhythm
   e. Environmental manifestations of synchrony – fireflies, menstrual cycles, and Pokemon

Class Presentation: Circadian disturbances within mental illness

Readings:

  Chapter 2 – Human Rhythms: Basic Processes
  Chapter 3 – Rhythmic Pharmacology
  Chapter 4 – Jet Lag Can Be a Drag


III. Role of Rhythm in Language and Social Cognition

a. Temporal structure of speech and language
   1. Rhythmic structure in the articulation of phonemes, words, sentences
   2. Effects on cognitive behavior
b. Temporal coordination in conversational interaction
   1. Turn-taking behavior
   2. Interactional synchrony
   3. Speaker accommodation and congruence
   4. Applications to doctor-patient interactions
c. Social impressions derived from temporal qualities of the voice

Class Presentation: Temporal metaphors and referential time.

Readings:


IV. Tempo

a. Limits on perception - a range of tempo sensitivity
b. Cognitive processing of tempo information:
   1. tempo preferences
   2. memory for tempo information
   3. tempo perception - some applications to errors in automobile driving
c. Relationship between time and space - kappa/tau effects; tempo illusions
d. Internal tempo
e. Cross-cultural variations in the pace of life

Class Presentation: Acceleration of time due to technology and its effects on psychological behavior

Readings:


1. Life as a Type A
2. Pacemaker
3. On Your Mark, Get Set, Think!
4. Eat and Run
5. How Many Hours Do You Work?

V. Event Duration

a. Research paradigm - prospective vs. retrospective
b. Behavioral measures of event duration: tasks and measures of accuracy and directional bias
c. Models of Experienced Duration - Prospective Timing
   1. Internal Clock
   2. Attentional Gate - impact of attentional variables and arousal
d. Models of Remembered Duration - Retrospective Timing
   1. Memory-Based Models:
      - Storage Size Hypothesis
      - Cognitive Change Hypothesis
   2. Shortcomings and Limitations
   3. Structural Remembering Approach - the influence of event structure, learning, and expectancies; predicted duration estimates
   4. A modified version of the attentional gate model

Class Presentation: Temporal judgments in sports.

Readings:


VI. Temporal Perspective

a. Components of experiential time within the self
b. The multidimensional nature and measurement of temporal perspective
c. Correlates of future-orientation
d. Changes across the life-span
e. Disturbances of temporal perspective due to:
   1. hypnosis
   2. delinquency
   3. mental illness

Class Presentation: Psychological distance and temporal construal.

Readings:


VII. Role of Time in Autobiographical Memory

a. Autobiographical memory and its relationship to other memory systems
b. The temporal organization of personal memories:
   1. The use of temporal reference frames in remembering
   2. The “bump” of autobiographical memory
   3. Childhood amnesia
c. Event dating:
   1. Factors influencing the accuracy of event dating
   2. Reconstructive processes through temporal schemas and landmarks
   3. Public memories of news events
d. Prospective memory

Class Presentation: The development of temporal concepts in children.

Readings:


VIII. Society’s Influence on Experienced Time

a. Monochronic vs. Polychronic Societies
b. Social time from three cultural perspectives:
   1. Linear Model
   2. Circular Model
   3. Procedural Model
c. Utilitarian concept of time – time as an economic resource
d. Applications to consumer research
e. Time as embedded within social organizations
   1. Various forms of temporal regularity within social systems
   2. The stratification of self time, interaction time, and institutional time
f. Perceptions of protracted duration within social events

Class Presentation: Time and art.

Readings:


  1. Living on Event Time
  2. Time and Power: The Rules of the Waiting Game


IX. Neural Bases of Temporal Behavior

a. Interval timing vs. circadian timing
b. Neural correlates of the Internal Clock/Attentional Gate Model
   1. Basal Ganglia - timing and force of movements
   2. Substantia Nigra - dopamine receptors and the pacemaker; Parkinson’s disease
   3. Cerebellum - movement timing, accuracy, and coordination; temporal production and perception
4. Frontal Cortex - planning, attentional resources, temporal ordering, prospective judgments
5. Hippocampus - retrospective duration judgments, anterograde amnesia, Korsakoff’s syndrome

Class Presentation: Temporal behavior of animals.

Readings:


• Sacks, O. (1990). The lost mariner. From The Man Who Mistook His Wife for a Hat and Other Clinical Tales.


Course Requirements

I. Class Presentation

Each of you will assemble in small groups and be required to give an in-class presentation on a topic designed to provide greater breadth to an area discussed in class. You should plan on speaking for 30 min. and rely on a Powerpoint presentation (which I will then post on Moodle so that it is available to everyone). Each person in the group is expected to speak and so you should allocate the half hour in an equitable fashion. I’ve provided a set of presentation topics on the syllabus and will try to ensure that everyone receives a topic that is acceptable to them.

II. Paper

In addition to the presentation, you will also be required to write a paper for the course. You are free to choose any topic that interests you as long as it involves some aspect of temporal behavior. It could be a topic that was never discussed, or a topic that was addressed in class but explored from a different perspective. In either case, the paper should be around 10-15 pages and rely on the APA style of referencing. Most of the paper should serve as a review of the relevant literature but the last 2-3 pages should provide your own thoughts and evaluation (e.g. critiques of the literature; ideas for future research). Your paper will be due on Thursday, April 2
Psy 220 – Psychology of Time  
Schedule of Lectures and Presentations  
Spring, 2015

Jan. 20 – Overview and History of Time-keeping  
22 - Rhythm  
27 - Rhythm  
29 – Rhythm
Feb. 3 – Rhythm - Presentation on Circadian Disturbances in Mental Illness  
5 – Time and Language  
10 – Time and Language  
12 – Time and Language – Presentation on Temporal Metaphors  
17 - Tempo  
19 - Tempo  
24 – Tempo – Presentation on Tempo and Technology  
26 - Duration
March 3 - Duration  
5 – Duration – Presentation on Timing in Sports  
10 – Spring Break  
12 - Spring Break  
17 – EXAM ONE  
19 – Temporal Perspective  
24 – Temporal Perspective  
26 – Temporal Perspective - Presentation on Psychological Distance and Temporal Construal  
31 – Time and Autobiographical Memory
April 2 – Time and Autobiographical Memory – PAPER DUE  
7 – Presentation on Development of Time  
9 – Social Time  
14 – Social Time  
16 – Social Time – Presentation on Time and Art  
21 – Neural Mechanisms  
23 – Neural Mechanisms  
28 – Neural Mechanisms – Presentation on Animal Time  
30 – EXAM TWO
Circadian Disturbances  Temporal Metaphors  Tempo and Technology

Time and Sports  Temporal Construal  Development of Time

Time in Art  Animal Time