Contemporary Hypnosis (2000)
Vol. 17, No. 1, pp. 32–41

MAIN PAPERS

HYPNOTIC SUGGESTIBILITY AND ABSORPTION: REVISITING THE CONTEXT EFFECT

Leonard S. Milling, Irving Kirsch and Cheryl Burgess

University of Connecticut, USA

Abstract

Measures of hypnotic suggestibility and absorption were administered to 150 participants in the context of a single experiment and to 146 participants in the guise of different experiments. Half of the participants received the absorption scale before being tested for suggestibility and half after. In both orders of administration, associations between suggestibility and absorption were significantly stronger when assessed in the same experimental context than when assessed in different contexts, and both variables were significantly affected by testing context. Overall, the findings indicate that relations between absorption and suggestibility are moderated by context and that this effect is not an artefact of non-random sampling or of differences in time intervals between testing sessions. The results suggest that the association between absorption and suggestibility is modest at best and challenge the contention that absorption is a reliable personality trait marker of suggestibility.

Key words: hypnosis, hypnotic suggestibility, absorption, context effect

Hypnotic suggestibility has been characterized as a construct in need of a good nomological network (Nadon, 1997). Indeed, there are few personality traits that reliably predict suggestibility. One trait thought to contradict this general pattern is absorption (Tellegen and Atkinson, 1974; Tellegen, 1982), defined as 'a characteristic of the individual that involves an openness to experience emotional and cognitive alterations across a range of situations' (Roche and McConkey, 1990: 91). Individuals who score high on measures of absorption are able to become immersed in a variety of sensory and imaginative experiences (reviewed in Roche and McConkey, 1990). Many researchers have reported moderate correlations between absorption and hypnotic suggestibility (reviewed in de Groh, 1989; Roche and McConkey, 1990; Kirsch and Council, 1992). However, some investigators have questioned the magnitude of this relationship and have suggested that the association may be weak or even nonexistent, except when measured in the same experimental context (reviewed in Council, Kirsch and Grant, 1996). The purpose of the current investigation is to help clarify past reports of a context effect in relations between absorption and hypnotic suggestibility.

The context effect refers to the reactive effects of measurements made in the same experimental situation (Tourangeau and Rasinski, 1988). The first report of an effect of testing context on scale correlations was presented in a study of absorption and hypnotic suggestibility (Council, Kirsch and Hafner, 1986). In that study, the Tellegen Absorption Scale (TAS) and a measure of suggestibility were administered to

participants in one of two different ways. One group of participants was given the TAS and was then administered the suggestibility scale. Another group of participants was given the measures of absorption and hypnosis in completely separate settings, so that they would not realize that the TAS was part of a hypnosis experiment. Significant correlations between absorption and suggestibility scores were obtained only when the measures of absorption and hypnotic suggestibility were given in the same setting and the correlation was significantly greater in the same context condition than it was in the different context condition.

Council et al. (1986) hypothesized that context effects occur when: (1) participants respond to a measuring instrument with knowledge of the experimenter's hypothesis that it is related to a previously completed instrument; and (2) the instrument is transparent enough so that the direction of the hypothesized relation can be deduced. The obvious similarity between some TAS items (for example, 'if I wish, I can imagine that my body is so heavy that I could not move it if I wanted to') and measures of suggestibility may lead to the adoption of a response set when contextual cues prompt research participants to think of them in relation to each other. This response set seems to operate in both directions, influencing hypnotic performance when the absorption scale is administered first (Council et al., 1986; de Groot, Gwynn and Spanos, 1988; Drake, Nash and Cawood, 1990–91; Nadon, Hoyt, Register and Kihlstrom, 1991;[1] Perlini, Lee and Spanos, 1992; Oakman, Woody and Bowers, 1996) and influencing responses to the absorption scale when the suggestibility scale is administered first (Spanos, Arango and de Groot, 1993; Oakman et al., 1996). The response sets established by measuring two constructs in the same context might influence responding to the second scale either as a response expectancy (Kirsch, 1985) or through compliance with perceived experimental demand (Orne, 1959; Wagstaff, 1981).

However, methodological problems in many of these context studies leave open the possibility of two alternative interpretations. First, participants were not randomly assigned to conditions in most studies (Council et al., 1986; Drake et al., 1990–91; Nadon et al., 1991; Oakman et al., 1996). Indeed, in one study, participants in the same context and different context conditions were drawn from different populations (Oakman et al., 1996). As a result, pre-existing differences between participants comprising the same context and different context groups may have contributed to the obtained pattern of relations.

Second, in some studies (Council et al., 1986; Nadon et al., 1991; Perlini et al., 1992), the interval between the assessment of absorption and suggestibility was greater in the different context condition than in the same context condition, and in other studies (de Groot et al., 1988; Spanos et al., 1993; Oakman et al., 1996), the interval between sessions within the various conditions is unclear. Drake et al. (1990–91) reported that relations between absorption and hypnotic suggestibility were significant when the measures were given at the same time, but not when the assessments were separated by a gap of 24–36 hours. This observation suggests another potential confound in tests of the context hypothesis. Reported differences may have been due to the temporal factor, rather than to differences in the testing context. Specifically, there may be a priming effect due to proximate scale administration, rather than an effect due to the participant's knowledge of the hypothesized relation between the scales.

The study reported here was designed to test the directionality of the context effect while at the same time correcting for confounds evident in previous studies. A

test of directionality is important because it speaks to the generalizability of the context effect. Is it only responses to hypnotic suggestions that are affected, or are responses to the absorption scale affected as well? Thus, in this study, participants were assigned to conditions randomly, the order of administration of the measures of suggestibility and absorption was counterbalanced, and the interval between testing sessions was the same in both conditions.

Method

Participants

Participants in the study were 116 male and 180 female introductory psychology students who took part in exchange for credits needed to satisfy a course requirement. Participants were drawn from a pool of about 1400 students taking introductory psychology at the University of Connecticut.

Instruments

Tellegen Absorption Scale (TAS)

The absorption subscale of the Differential Personality Questionnaire (Tellegen, 1982) is a 34-item, true–false, self-report questionnaire measure of absorption. Tellegen (1982) reported an internal consistency coefficient of 0.88. Evidence of the scale's validity is reviewed in Roche and McConkey (1990). The TAS was administered without filler items and no other scales were administered in the same session.

Waterloo-Stanford Group Scale of Hypnotic Susceptibility (WSGC)

The WSGC (Bowers, Laurence and Hart, 1982) is a group adaptation of the Stanford Hypnotic Susceptibility Scale: Form C (SHSS:C, Weitzenhoffer and Hilgard, 1962). A standard eye closure induction and 12 hypnotic suggestions are presented via audiotape. Thereafter, participants rate their responses to the 12 suggestions in a scoring booklet. The WSGC was administered in groups of 10 to 60 participants.

For behavioural scoring of the WSGC, participants indicate whether or not an outside observer would have seen an overt response to each of the 12 hypnotic suggestions. Each suggestion is rated pass or fail, yielding total behavioural scores (WSGC:B) ranging from 0 to 12. Internal consistency has been reported as 0.80 in one sample and 0.81 in another (Bowers, 1993). A correlation with the individually administered SHSS:C indicates that this group adaptation is a valid measure of hypnotic response (Bowers, 1993).

In this study, a subjective scoring system was added to the WSGC in which participants rated the 'realness' of their experience on the 12 hypnotic suggestions. Each suggestion was rated on a five-point scale, with anchors varying as a function of the content of suggestions. For example, the anchors for the mosquito hallucination suggestion were 'I did not hear or feel a mosquito' and 'I heard and felt a mosquito as vividly as if it were really there'. Total subjective scores (WSGC:S) ranged from 12 to 60. Reliability analysis of WSGC:S scores produced a Cronbach's alpha coefficient of 0.89, indicating excellent internal consistency. A correlation of 0.84 ($p<0.001$) with behavioural scores on the WSGC indicates that the subjective scores are valid measures of suggestibility.

Procedure

At the beginning of the semester, students in introductory psychology classes were randomly assigned to one of four conditions: (1) different context, hypnosis first (WSGC-TAS); (2) different context, absorption first (TAS-WSGC); (3) same context, hypnosis first (WSGC-TAS); and (4) same context, absorption first (TAS-WSGC).

Different context WSGC-TAS

Seventy-two students (32 males and 40 females) comprised the different context, hypnosis first condition. Initially, an experimenter recruited these 72 individuals by telephone to take part in a one-session experiment on hypnosis during which the WSGC was administered by a hypnosis screening team. Shortly thereafter, these individuals were recruited by a different experimenter via the telephone to participate in a completely separate one-session experiment on personality, at which time they completed the TAS. The second session took place an average of 8.85 days later (SD = 2.84; range = 4–13 days). To help disguise the connection between the sessions, the TAS was administered in small groups by research assistants who were not part of the hypnosis screening team at a separate location on campus.

Different context TAS-WSGC

An additional 74 students (30 males and 44 females) constituted the different context, absorption first condition. An experimenter initially recruited these 74 participants by telephone to participate in a one-session experiment on personality during which they completed the TAS. To disguise the connection between the sessions, the TAS was administered by research assistants who were not part of the hypnosis screening team. Thereafter, a different experimenter recruited these 74 individuals to take part in a separate one-session experiment on hypnosis where a hypnotic induction was performed and the WSGC was administered by the hypnosis screening team at a separate location on campus. This second session took place an average of 7.70 days later (SD = 2.53; range = 4–13 days).

Same context WSGC-TAS

Seventy-one individuals (25 males and 46 females) made up the same context, hypnosis first condition. These participants were contacted via telephone by an experimenter on behalf of the hypnosis laboratory and asked to participate in a two-session hypnosis experiment. At the beginning of both sessions, the senior author read participants the following instructions adapted from Spanos et al. (1993: 73; also see de Groot et al., 1988; Drake et al., 1990-91):

> In this two-session experiment on hypnosis, you will be administered a test of hypnotic suggestibility one week and a questionnaire that measures hypnotic-like experiences the other week. We are interested in determining whether your performance on the test of hypnotic suggestibility will be related to your answers on the hypnotic-like experiences questionnaire.

In the first session, these participants were administered the WSGC by the senior author and the hypnosis screening team. During the following week, participants returned to the same room on campus where the senior author administered the TAS. The gap between the two sessions averaged 6.97 days (SD = 0.24; range = 6–8 days).

Same context TAS-WSGC

Finally, 79 individuals (29 males and 50 females) comprised the same context, absorption first condition. These participants were contacted via telephone by an experimenter on behalf of the hypnosis laboratory and recruited to participate in a two-session hypnosis experiment. At the beginning of both sessions, the senior author read the previously described instructions to participants. During the first session, participants completed the TAS. The following week, participants returned to the same room on campus where the senior author and the hypnosis screening team administered the WSGC. The gap between the two sessions averaged 7.37 days (SD = 0.75; range = 6–10 days).

Results

Preliminary analyses

The study was described to same context participants as a two-session experiment, and both sessions were scheduled during the same telephone contact. In contrast, participants in the different context condition were recruited for what would seem to be two separate experiments. As a result, there was greater attrition in the different context condition than in the same context condition, yielding initial sample sizes of 83 and 150, respectively. To obtain more balanced cell sizes, 63 replacement participants were selected randomly from the same pool of subjects.

To assess the equivalence of these two subgroups of randomly selected participants in the different context condition, hierarchical regressions were performed in which WSGC:B and WSGC:S scores were employed as the dependent variables, and absorption and assignment status (that is, original assignment versus replacement) were used as independent variables. For each analysis, absorption and assignment status was entered into the prediction equation first, followed by the interaction of these variables. For both WSGC indices, this set of independent variables failed to produce a significant main effect for assignment status or a significant interaction for absorption × assignment. Correlations between suggestibility and absorption were virtually identical for both groups of participants. The correlation of absorption with WSGC:B scores was 0.18 for participants originally assigned to the different context condition and 0.17 for replacement participants. The correlation of absorption with WSGC:S scores was 0.16 for the initially selected participants and 0.16 for replacement participants. Because the correlations were essentially the same for both subgroups, subsequent analyses were conducted on the full sample of participants.

To assess the impact of gender, hierarchical regressions were performed in which WSGC:B and WSGC:S scores were used as the dependent variables and gender, absorption and context were the independent variables. Contrary to the findings of de Groot et al. (1988), these analyses did not produce a main effect for gender or a significant interaction between gender and the other independent variables.

Analysis of context effects

Means and standard deviations for the WSGC and the TAS are presented in Table 1. Correlations between these variables are presented in Table 2. The context hypothesis predicts that absorption and hypnotic suggestibility will be more highly associated when assessed in the same experimental context than when assessed in different contexts. To test this hypothesis, hierarchical regressions were performed in which WSGC:B and WSGC:S scores were utilized as dependent variables and TAS scores, context and order were employed as independent variables. For each analysis,

absorption, context and order of administration were entered into the prediction equation first, followed by all possible two-way interactions, and then by the three-way interaction. All interaction terms were tested for significance with alpha set at 0.10, as recommended by Pedhazur (1982: 440) because of the very low power of these tests.

Table 1. Means and standard deviations (in parentheses) for TAS and WSGC scores as a function of contextual cues and order of scale administration

Scale order	Context		
	Same	Different	Combined
WSGC:B			
Absorption first	6.66 (2.99)	5.62 (2.71)	6.16 (2.89)
Hypnosis first	5.49 (3.22)	5.07 (2.50)	5.28 (2.88)
Combined	6.11 (3.14)	5.35 (2.61)	5.73 (2.91)
WSGC:S			
Absorption first	33.49 (11.00)	30.00 (10.62)	31.80 (10.93)
Hypnosis first	29.99 (10.55)	29.51 (8.73)	29.75 (9.65)
Combined	31.83 (10.90)	29.76 (9.70)	30.81 (10.36)
TAS			
Absorption first	19.82 (5.95)	20.88 (5.92)	20.33 (5.94)
Hypnosis first	18.96 (5.86)	20.25 (5.96)	19.61 (5.93)
Combined	19.41 (5.90)	20.57 (5.93)	19.98 (5.93)

Table 2. Correlations between TAS and WSGC scores as a function of contextual cues and order of scale administration

Scale	Order	Context	
		Same	Different
WSGC:B			
Absorption first		0.30**	0.19
Hypnosis first		0.46***	0.16
Combined		0.39***	0.18*
WSGC:S			
Absorption first		0.32**	0.12
Hypnosis first		0.37***	0.20
Combined		0.35***	0.16

*** $p<0.001$, ** $p<0.01$, * $p<0.05$

The results of these analyses indicated that WSGC:B scores were significantly predicted by absorption, F (1,288) = 25.33, $p<0.001$, context, F (1,288) = 8.35, $p<0.004$, order F (1,288) = 5.68, $p<0.02$, and the absorption × context interaction, F (1,288) = 5.44, $p<0.02$. The means presented in Table 1 reveal that WSGC:B scores were higher

in the same context condition than in the different context condition, and in the absorption first condition compared with the hypnosis first condition. As shown in Table 2, the significant absorption × context interaction was due to a stronger association between absorption and suggestibility in the same context condition compared with the different context condition.

WSGC:S scores were significantly predicted by absorption, $F(1,288) = 19.57$, $p<0.001$, context, $F(1,288) = 4.99$, $p<0.03$, and the absorption × context interaction, $F(1,288) = 3.89$, $p<0.05$. Mean WSGC:S scores were significantly higher in same context condition than in the different context condition. The relation between absorption and WSGC:S scores was significantly greater in the same context condition than in the different context condition.

To test for effects of context and order on TAS scores, an additional regression analysis was conducted with the TAS as the dependent variable and suggestibility, context, order and the context by order interaction as independent variables. This revealed a main effect of context on absorption, $F(1,288) = 5.80$, $p<0.02$. Inspection of Table 1 reveals that TAS scores were lower when obtained in the context of a hypnosis experiment than when they were obtained without any cues of the scale's hypothesized relation to hypnosis. Neither order of administration nor the order by context interaction was significant.

Discussion

Consistent with most other investigations in this area, the findings of this study indicate that hypnotic suggestibility and absorption were more highly related when assessed in the same experimental context than when assessed in different contexts. In contrast to past studies, we held time between assessment sessions constant and randomly assigned participants to condition. A significant context effect was still obtained. This suggests that context effects are not an artefact of non-random sampling or differences in time intervals. Instead, they seem to result from participants' knowledge of the hypothesized relation between the two constructs and may reflect compliance with experimental demand or response expectancy effects. Expectancy mediation is suggested by reported correlations between absorption and response expectancy and by the failure of the relation between absorption and suggestibility to remain significant when expectancy is controlled statistically (Council, Kirsch, Vickery and Carlson, 1983; Council et al., 1986).

Our data reveal that a context effect was activated regardless of which construct was measured first. When suggestibility and absorption scales were administered as part of the same study, participants scored higher on the suggestibility scale and lower on the absorption scale. Also, the association between the two variables was significantly stronger when they were assessed as part of the same study. These findings indicate that testing context can influence responses to the absorption scale, as well as responses to suggestibility scales.

In the current study, participants in the same context condition were provided with contextual cues closely adapted from Spanos et al. (1993) and similar to those used by de Groot et al. (1988) and Drake et al. (1990–91) to establish assessment context. Accordingly, these subjects were directly informed of our interest in the relationship between their absorption scores and their responses to the suggestibility measure. With contextual cueing, about 15% of the variation in behavioural suggestibility scores was accounted for by absorption scores. Among same context participants, only about 12% of the variance in subjective suggestibility was shared with absorption.

The explicit cueing used in our study generally parallels the approach employed in many other context studies. For example, de Groot et al. (1988) provided their same context participants with verbal cues similar to those of Spanos et al. (1993). Drake et al. (1990–91) told subjects that their scores on previously administered measures of absorption might be related to their responses on a hypnotic suggestibility scale. Oakman et al. (1996) first administered a suggestibility scale during a class meeting on hypnosis and later administered the TAS during a class meeting on the personality correlates of hypnotic ability. These investigations consistently report a significant context effect. However, even with explicit cueing, none of these studies finds that more than 19% of the variation in suggestibility is accounted for by absorption (Oakman et al., 1996).

What happens when the connection between absorption and suggestibility is not made explicit to subjects in a same context condition? Presumably, the relationship between suggestibility and absorption would be weaker. For example, Council et al. (1986) did not provide explicit contextual cues to participants in the same context condition and still obtained a significant context effect. However, among same context participants, Council and his colleagues found that absorption scores accounted for only 9% of the variation in suggestibility. This result suggests that even when absorption and suggestibility are assessed in the same experimental context, without explicit cueing of the connection between variables, the percentage of shared variance may be quite modest.

In our study, participants in the different context condition were presented with few, if any, cues that absorption and suggestibility were being measured as part of a single experiment. With context cues minimized, absorption accounted for a meagre 3% of the variance of behavioural suggestibility scores. A few investigations have reported significant associations between absorption and suggestibility scores obtained in the guise of separate experiments (Nadon et al., 1991, Experiment 2; Perlini et al., 1992). However, in most studies, when absorption and suggestibility are measured separately, the correlation between measures is non-significant and the percentage of shared variance is very small. For example, Nadon et al. (Experiment 1) reported that 4% of the variability in absorption was shared with suggestibility, and other studies found that less than 2% of the variance was shared (Council et al., 1986; de Groot et al., 1988; Drake et al., 1991; Spanos et al., 1993; Oakman et al., 1996). Hence, when context cues are minimized, the association between absorption and suggestibility would seem to be weak.

In sum, the results of this study indicate that the relationship between absorption and suggestibility is significantly greater when these constructs are assessed in the same experimental context versus separate contexts. The findings suggest that the context effect is not the result of methodological flaws and it seems to occur regardless of which construct is measured first. As a group, studies in this area indicate that when the connection between the measures of absorption and suggestibility is explicitly pointed out to participants, the resulting correlations are moderate, but not strong. Moreover, when contextual cues are minimized, the association between absorption and suggestibility is typically weak. Overall, this literature tends to suggest that the relationship between absorption and suggestibility may be quite modest and challenges the contention that absorption is a reliable personality trait marker of suggestibility. Thus, the search for a good nomological network of hypnotic suggestibility continues.

Acknowledgements

This research was partially supported by a postdoctoral fellowship from the Social Sciences and Humanities Research Council of Canada, awarded to the third author.

The authors gratefully acknowledge the assistance of their many undergraduate research assistants in various phases of this study, with special appreciation for Michelle Levine, Jason Cassell, Suzanne Meunier, Janet Jachimowicz and Cathy Dolan.

Note

1 Nadon et al. (1991) obtained a context effect that was not reported in their article (see Kirsch and Council, 1992). In the part of their study that replicated Council et al.'s (1986) procedures, they obtained a correlation between absorption and suggestibility of 0.24 in the same context condition and 0.05 in the separate context condition, and these two correlations differed significantly ($z = 2.02$, $p < 0.05$).

References

Bowers KS (1993) The Waterloo-Stanford Group C (WSGC) scale of hypnotic susceptibility: Normative and comparative data. International Journal of Clinical and Experimental Hypnosis 41: 35–46.

Bowers PG, Laurence JR, Hart D (1982) A group scale of hypnotic susceptibility: Revision and expansion of Form C. (ASIS-NAPS Document No. 04632.) New York: National Auxiliary Publications Service.

Council JR, Kirsch I, Grant DL (1996) Imagination, expectancy and hypnotic responding. In RG Kunzendorf, NP Spanos, BJ Wallace (eds) Hypnosis and Imagination. Amityville, NY: Baywood, pp. 41–65.

Council JR, Kirsch I, Hafner LP (1986) Expectancy versus absorption in the prediction of hypnotic responding. Journal of Personality and Social Psychology 50: 182–9.

Council JR, Kirsch I, Vickery AR, Carlson D (1983) 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology 51: 432–40.

de Groh M (1989) Correlates of hypnotic suggestibility. In NP Spanos, JF Chaves (eds) Hypnosis: The Cognitive-Behavioral Perspective. Buffalo, NY: Prometheus Books, pp.32–63.

de Groot HP, Gwynn MI, Spanos NP (1988) The effects of contextual information and gender on the prediction of hypnotic susceptibility. Journal of Personality and Social Psychology 54: 1049–53.

Drake SD, Nash MR, Cawood GN (1990–91). Imaginative involvement and hypnotic susceptibility: A re-examination of the relationship. Imagination, Cognition and Personality 10: 141–55.

Kirsch I (1985) Changing Expectations: A Key to Effective Psychotherapy. Pacific Grove, CA: Brooks/Cole Publishing.

Kirsch I, Council JR (1992) Situational and personality correlates of suggestibility. In E Fromm, M Nash (eds) Contemporary Hypnosis Research. New York: Guilford, pp.267–91.

Nadon R (1997) What this field needs is a good nomological network. International Journal of Clinical and Experimental Hypnosis 45: 314–23.

Nadon R, Hoyt IP, Register PA, Kihlstrom JF (1991) Absorption and hypnotizability: Context effects re-examined. Journal of Personality and Social Psychology 60: 144–53.

Oakman JM, Woody EZ, Bowers K (1996) Contextual influences on the relationship between absorption and hypnotic ability. Contemporary Hypnosis 13: 19–28.

Orne MT (1959) The nature of hypnosis: Artifact and essence. Journal of Abnormal Psychology 58: 277–99.

Pedhazur EJ (1982) Multiple Regression in Behavioral Research (2nd edition). New York: Holt, Rinehart & Winston.

Perlini AH, Lee SKA, Spanos NP (1992) The relationship between imaginal ability and hypnotic susceptibility: Does context matter? Contemporary Hypnosis 9: 35–41.

Roche S, McConkey KM (1990) Absorption: Nature, assessment, and correlates. Journal of Personality and Social Psychology 59: 91–101.

Spanos NP, Arango M, de Groot HP (1993) Context as a moderator in relationships between attribute variables and hypnotizability. Personality and Social Psychology Bulletin 19: 71–7.

Tellegen A (1982) Brief manual for the Differential Personality Questionnaire. Unpublished manuscript, University of Minnesota.

Tellegen A, Atkinson G (1974) Openness to absorbing and self-altering experiences ('absorption'), a trait related to hypnotic susceptibility. Journal of Abnormal Psychology 83: 268–77.

Tourangeau R, Rasinski KA (1988) Cognitive processes underlying context effects in attitude measurement. Psychological Bulletin 103: 299–314.

Wagstaff GF (1981) Hypnosis, Compliance and Belief. New York: St Martin's Press.

Weitzenhoffer AM, Hilgard E (1962) Stanford Hypnotic Susceptibility Scale: Form C. Palo Alto, CA: Consulting Psychologists Press.

Address for correspondence:
Leonard S. Milling, PhD
University of Connecticut,
Department of Psychology (U-1020),
Storrs, CT 06269-1020,
USA
Email: milling@uconnvm.uconn.edu