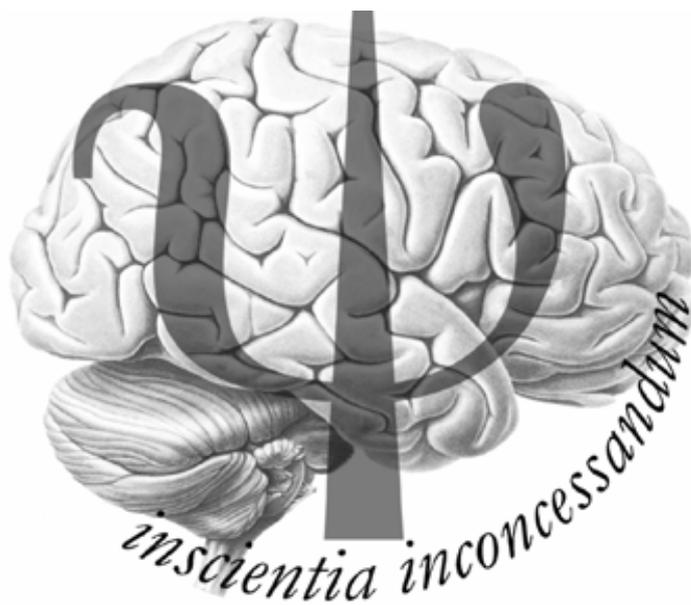


PSYCCOLLOQUY 2017

Department of Psychology
University of Otago



23 November 2017
Main Common Room
University College



Keynote Presenter

This year we are pleased to have Dr Sylvia Nissen give the keynote address titled

The politics of disengagement: Young people, participation and the 2017 election

Sylvia is a Postdoctoral Fellow in the Department of Political Science and International Relations at the University of Canterbury, and a Research Fellow at the Centre for Understanding Sustainable Prosperity (CUSP) at the University of Surrey, UK. She completed her doctorate earlier this year in student political action in Aotearoa for which she received the Kate Sheppard Memorial Prize, and is currently converting her research into a book. For her post-doc she is working on the project CYCLES, a study of the attitudes and aspirations of young people living in seven cities around the world.

In addition, there will be presentations of research by students from within the Department of Psychology and a prize for the best student presentation.

Psych colloquy 2017 Committee

Dr Julien Gross

Dr Karen Tustin

Special thanks to

Professor Michael Colombo

Sabrina Goh

Department of Psychology Technicians

Psycolloquy 2017

9.00 am WELCOME

9.15 am **Andrea Chin**

Effects of the independent, relational, and collective self on well-being

9.30 am **Ana Stojanov**

Using item response theory to develop a conspiracy mentality scale

9.45 am **Genevieve Iversen**

Do people 'leak' signs of their true feelings when lying about emotional experiences?

10.00 am **Amanda Clifford**

Adding to our kete: Weaving together our understanding of reminiscing in the home-based Early Childhood Education context

10.15 am **Tess Goldsmith**

Attention to detail: Adults' ability to remember specific details of their childhood experiences

10.30 am **Jordan Gardner**

Examining the effects of mirror movements on the spread of information within the somatosensory cortex via tactile perceptual learning

11.00 am KEYNOTE ADDRESS

Dr Sylvia Nissen

The politics of disengagement: Young people, participation and the 2017 election

12.00 pm LUNCH

- 1.00 pm **Kirstie O'Hare**
Schizotypy and suicidality: A Mendelian Randomisation analysis
- 1.15 pm **Ashleigh Barrett-Young**
Childhood psychosocial adversity and cardiovascular health in midlife: A lifecourse study
- 1.30 pm **Claire Mitchell**
Does narrative coherence predict depression over time?
- 1.45 pm **William Clark**
A 300 million-year-old puzzle: Face cells in the pigeon (*Columba Livia*)
- 2.00 pm **Katie Graham**
Reproduction and resistance: The role of secondary education in young people's understandings of gender and sexuality
- 2.15 pm **Andrew Mills**
Taking photos of a crime may lead to overconfidence in eyewitness memory
- 2.30 pm **Marea Colombo**
The effect of gender congruency on visual perspective taking
- 2:45 pm **Lianne Atkinson**
Older adults' emotion recognition unaffected by stereotype threat
- 3:00 pm **Hadar Hazan**
Basic sense of self in youth at high risk for developing schizophrenia

3.15 pm AFTERNOON TEA and STUDENT PRIZE PRESENTATION

*We would like to thank the
Department of Psychology and Continuing Education for supporting
the Department's presentation day for students' research*

KEYNOTE ADDRESS

The politics of disengagement: Young people, participation and the 2017 election

S. Nissen

*Sustainable Citizenship and Civic Imagination: Hei Puāwaitanga,
Department of Political Science and International Relations,
University of Canterbury*

Participation at the ballot box in New Zealand has increased slightly at the past two elections, yet young people continue to turn out in much lower numbers than their older counterparts, despite some suggestions of a possible 'youthquake.' So what can be done to get younger citizens to engage politically – or does that question miss the point? This presentation takes a look at some of the dominant approaches for explaining youth political participation across psychology, economics, and political science. I will discuss what these theories can tell us about the rise of Jacinda Arden, the fallout from Metiria Turei's confession, and an almost universally discounted \$11 billion hole in a budget. Thinking forward to the next election, I will also consider changes that could support young people's political participation and help sustain New Zealand's democracy.

Effects of the independent, relational, and collective self on well-being

A. Chin, M. Taumoepeau, and R. Linscott

Department of Psychology, University of Otago

A person's self-concept is made up of three co-existing selves. The independent self emphasises the needs and wants of oneself, the relational self emphasises close others (e.g., friends), and the collective self emphasises larger collectives (e.g., ethnic group). Each self has unique effects on well-being and people can have high levels of one, two, or three selves. I aimed to investigate the effects of self-concepts on well-being. Specifically, I hypothesised that having high levels of two (i.e., independent and relational, relational and collective, independent and collective) or all three selves is associated with greater life satisfaction and distress. Having two or more selves can promote well-being through an additive effect, where each self has unique advantages and skills, providing a person with a larger repertoire of adaptive behaviour; or through a multiplicative effect, where the disadvantages of one self may be negated or buffered by another self. Undergraduate psychology students ($n = 352$, 69 males, $M = 19.9$ years) completed questionnaires on self-concept, life satisfaction, and distress. Hypotheses were tested using bootstrapped hierarchical linear regression. Having high levels of independence and relatedness contributed to greater life satisfaction (total $R^2 = .21$, $p < .001$). Independence alone, but relatedness and collectiveness together, were associated with less distress. Independence and collectiveness together predicted greater distress (total $R^2 = .09$, $p < .005$). Hypotheses were partially supported. Being both independent and relational had a beneficial additive effect where each self uniquely promoted life satisfaction. However, being collective was only beneficial when the person also had high levels of relationality, and was disadvantageous when the person also had high levels of independence. Thus, relatedness buffered the disadvantages of collectiveness while independence did not.

Using item response theory to develop a conspiracy mentality scale

A. Stojanov and J. Halberstadt

Department of Psychology, University of Otago

Examining conspiracy theory beliefs is important because they are related with a range of negative outcomes. Existing measures of generic conspiracy beliefs have inadequate construct validity, rendering the need for a new scale. We outline the development of a scale to measure generic beliefs in conspiracy theories. The item pool was developed by asking MTurk participants to define a conspiracy theory. After the definitions were adapted to item format they were administered to another group of participants who rated their agreement with the statements. The process of using item response theory (IRT) to select the final items for the scale and the advantages of using IRT over classical test theory is described. The final scale discriminated well among participants with different levels of conspiracy mentality.

Do people 'leak' signs of their true feelings when lying about emotional experiences?

G. Iversen, T. Ruffman, J. Halberstadt, and J.E. Murray

Department of Psychology, University of Otago

Ekman (1992) has argued that liars may leak clues to their true feelings in fleeting emotional expressions. I tested this theory using facial recognition software.

Study 1 examined if participants' (N=102) facial expressions varied as a function of the content they had viewed when they honestly or deceptively described similar film content. Participants viewed disgusting and amusing films, and described these truthfully or deceptively by describing content of the opposite emotional valence. When brief episodes of increased muscle tension were isolated using computer software, a clear trend emerged for there to be more muscle movement in lies than truths across the face (i.e., in the brow, eyes, nose and chin) with the film content not contributing to this difference. Thus, the trend emerged for lies where participants had described amusing or disgusting content but had viewed divergent content (e.g., whether affective or neutral), and for lies where the speaker had viewed neutral content but described other neutral content.

Study 2 examined whether student observers noticed emotional information consistent with the predictions of leakage theory. Speakers who viewed disgusting content but described amusing content expressed more disgust than those truthfully describing amusing films. However, participants were not able to use this information to identify lies better than could be expected by chance. People were better able to identify when someone was truthfully describing a disgusting film and these judgements were related to the participants indicating that disgust was expressed. In summary, the results provided some support for the idea that failures to control behaviour may contribute to facial expression differences between lies and truths.

Adding to our kete: Weaving together our understanding of reminiscing in the home-based Early Childhood Education context

A.E. Clifford, E. Schaughency, E. Dovenberg, and E. Reese

Department of Psychology, University of Otago

Kōrerorero or reminiscing about shared past events is an almost universal activity between parents and children. Importantly, reminiscing has many potential benefits for children's development including increased oral language and socio-emotional competencies. Much of the reminiscing literature has focused on kōrerorero between mothers and their children; however, we know that many New Zealand children are participating in Early Childhood Education (ECE), and we do not yet know the extent to which reminiscing is happening within these ECE settings. Research in home-based ECE is particularly limited. The aim of this study was to investigate the extent home-based educators are reminiscing with the children and the forms of this shared kōrerorero.

This study is part of a wider longitudinal study offering professional development to home-based educators. During the base-line phase we asked 23 educators and 52 participating three- to five-year-old children to discuss a shared past event. In these interactions, educators spoke with children in groups varying in size from one-to-one interactions to one educator interacting with four children. When asked to talk about a shared reminiscing event, educators talked about a range of topics (e.g., special outings, a trip to the hospital with their teddy bears, or conversations linking to children's whānau). Planned analyses will describe the educators' reminiscing style when discussing these events with children, the content of these conversations, and explore links with children's participation and engagement in these conversations. Finally, we will look at how educator-child interactions correlate with developing children's socio-emotional competencies. Future directions of this study will evaluate whether the professional development module can help educators add another reminiscing tool to their reminiscing skill set.

Attention to detail: Adults' ability to remember specific details of their childhood experiences

T.K.G. Goldsmith, J.M. Ingram, and R. Zajac

Department of Psychology, University of Otago

Recent years have seen a dramatic increase in adults coming forward to make allegations of childhood sexual abuse. Despite decades often having passed since the alleged abuse occurred, these adults' statements are often richly detailed. One potential explanation for these rich accounts is that details have been added after the fact, through reinterpretation, the acquisition of new knowledge, or imagination and speculation. To date, however, researchers have not compared the types of specific details that children and adults can report about the same type of event. We asked a group of children and a group of adults to recount a time in their childhood when they received a physical injury. We asked them 15 questions about highly specific aspects of the event. Surprisingly, there was no effect of age group on number of questions answered. In fact, on some individual questions, adults were more likely than children to provide a response. A closer look at responses, however, showed that adults were far more likely than children to indicate that they were speculating. These findings have important implications for the investigation of historical abuse allegations. Abuse complainants are often anxious that investigators won't believe their allegations, and might therefore omit evidence of uncertainty from their accounts. Furthermore, speculative language tends to disappear with repeated retellings—often without awareness. For these reasons, further research into the ways in which accounts of emotional experiences can change over time should be considered a high priority.

Examining the effects of mirror movements on the spread of information within the somatosensory cortex via tactile perceptual learning

J.R. Gardner and L. Franz

Department of Psychology, University of Otago

In the neurotypical adult (NT), tactile perceptual training of grating, pressure, and roughness discrimination using a single finger has consistently been shown to spread to the immediately neighboring fingers and to the homologous finger on the opposite hand. The spread of learning is presumed to be limited to fingers in which there is a high degree of overlap between receptive fields of neurons in the somatosensory cortex. The degree of overlap is thought to be reflective of the topographic organisation of the cortex and the patterns of simultaneous finger use, which in turn lead to simultaneous stimulation. Notably, there exists a condition known as Congenital Mirror Movements (CMM) in which individuals are often unable to perform solely unimanual movements. The “mirror” hand mimics, with varying intensity, the movements of the volitional hand. As a result, the hand regions in the motor cortex of people with this condition share denser projections than normal across the corpus callosum. Because the motor and somatosensory cortices are bidirectional and these individuals have an extensive history of bimanual finger activation and stimulation, the hand regions of their somatosensory cortex may also be connected by extra dense neural projections. If such is the case, one would expect to find that tactile perceptual learning would spread more strongly bilaterally in these individuals than in NT, but that ipsilateral spread would be comparable for both groups. An experiment based on roughness discrimination using sandpapers with two grits was designed to test if and how tactile perceptual learning differs for NT and CMM people before and after one index finger is trained to correctly identify which sandpaper is being felt while blindfolded.

Schizotypy and suicidality: A Mendelian Randomisation analysis

K. O'Hare¹, T. Merriman², and R. Linscott¹

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²Department of Biochemistry, University of Otago

Subclinical psychotic symptoms, known as schizotypy, predict concurrent and future suicidal ideation and acts. Some suggest this relationship reflects the influence of shared environmental risk factors. However, this explanation does not account for the heritability of environmental risk factors, the link between schizotypy and more severe expressions of suicidality, or contemporary theories of suicidality. We tested whether schizotypy has a direct (causal) effect on the development of suicidal thoughts using a 'Mendelian Randomisation' (MR) analysis to avoid problems of reverse causality, confounding and measurement error associated with traditional observational studies. In a MR analysis, genetic variants are used as a proxy measure for a phenotype in order to make causal inferences about the effect of the phenotype on an outcome. We used a schizophrenia gene risk score (GRS), a measure of schizophrenia liability, as a proxy measure for schizotypy. Participants (n = 4,767) were part of the Philadelphia Neurodevelopmental Cohort, a publicly available resource designed to assess behavioural and biological factors contributing to mental illness in young adults. Schizotypy was found to be a strong predictor of both passive and active suicidal ideation. No relationship was found between the schizophrenia GRS and schizotypy, or between the schizophrenia GRS and suicidal ideation. The hypothesis that there is a causal relationship between schizotypy and suicidality was not supported, though it is unclear if this is due to the schizophrenia GRS being a poor proxy for schizotypy, or a true absence of a causal relationship. More research is needed to understand the genetic and environmental risk factors of both schizotypy and suicidality.

Childhood psychosocial adversity and cardiovascular health in midlife: A lifecourse study

A. Barrett-Young¹, J. Horwood², and R. Poulton¹

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²Department of Psychological Medicine, University of Otago

Psychosocial adversity in childhood has been shown to increase risk for poorer health in adulthood, but the pathways by which this association manifests are not clear. This study examines a pathway through which early adversity predicts retinal microvasculature, a novel marker of cardiovascular health. Structural equation modelling was used to test the hypothesis that socioeconomic status has a direct effect on cardiovascular health, as well as acting as a distal factor via which proximal risk factors, such as maltreatment and social isolation, exert their influence. Participants were members of the longitudinal Dunedin Multidisciplinary Health and Development Study. Childhood adversity variables were largely assessed prospectively, and retinal microvasculature data were collected at age 38. Confirmatory testing of the hypothesised model revealed that a cumulative indicator of social isolation, maltreatment, and socioeconomic disadvantage predicted wider venular calibre, a marker of systemic inflammation. Moreover, socioeconomic disadvantage by itself also exerted a direct effect on venular calibre. These findings suggest that socioeconomic disadvantage in childhood is both a proximal risk factor and a distal factor, via which social isolation and maltreatment exert effects on the retinal microvasculature.

Does narrative coherence predict depression over time?

C. Mitchell¹, E. Reese¹, and K. Salmon²

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²School of Psychology, Victoria University of Wellington

Narrative identity, the use of autobiographical memories to make sense of who one is, is an important developmental task and can be measured using “narrative coherence”. In adults there is a clear positive link between narrative coherence and psychological wellbeing and a negative one between narrative coherence and depression. In adolescence however, this relationship is less clear. Older adolescents who have more coherent narratives have higher levels of wellbeing whereas younger adolescents with more coherent narratives have lower levels of wellbeing. There have been mixed findings for these relationships in the middle-adolescence age-bracket (14-17 years). Researchers have demonstrated these links concurrently, but little is known about the longitudinal relationships among these variables. The current study has two aims: investigate the relationship between narrative coherence and depression in a middle-adolescent sample (M = 16.1 years) concurrently, and assess the longitudinal relationship between narrative coherence and depression. We hypothesise that, given the participants are approaching “older adolescence”, there will be a negative relationship between narrative coherence, as measured by causal and thematic coherence, and depression. We also hypothesise that higher narrative coherence will predict lower depression one year later. The current study elicited two written turning point narratives from 132 adolescents approximately one year apart. Findings show that T1 causal and thematic coherence are negatively associated with T1 depression but only T2 causal (not thematic) coherence is negatively associated with T2 depression. Neither causal nor thematic coherence predicted depression one year later, nor was the inverse relationship found. This suggests that narrative coherence is associated with depression at one point in time, but this does not have any implications for depression in the future, at least during this period of middle-adolescence.

A 300 million-year-old puzzle: Face cells in the pigeon (*Columba Livia*)

W.J. Clark and M. Colombo

Department of Psychology, University of Otago

In the mammalian visual system, a ventral pathway processes incoming visual information, terminating in the Inferior-Temporal cortex (IT cortex). Within the IT cortex exists a network of neurons that fire selectively to faces, mediating facial recognition. In the avian visual system, an equivalent ventral pathway terminates within a structure known as the entopallium. The primary aim of the present study was to expand our understanding of neurons' response properties in the entopallium. Four pigeons were trained on a Go-No/Go task to discriminate between two image sets, including images of pigeons' faces, whilst we performed single cell recordings from the entopallium. We hypothesised cells would fire selectively to images of pigeons' faces, exhibiting the characteristics of face cells others have found in the IT cortex. No cells were found that fired selectively to faces or demonstrated the characteristics of face cells in the entopallium. However, we demonstrated significantly greater numbers of neurons responsive to visual stimuli within the left hemisphere, consistent with a left hemispheric dominance of birds' visual abilities. A significant difference in excitatory/inhibitory cell composition and marked saccade associated burst firing, similar to that observed recently in V4 of Macaques, suggests the entopallium may correspond to the early extrastriate visual cortices, such as area V4. We are currently investigating three higher order visual areas that receive projections from the entopallium, to determine the neural correlates of facial recognition within the avian brain.

Reproduction and resistance: The role of secondary education in young people's understandings of gender and sexuality

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Research documents high schools as places where dominant discourses of gender and sexuality are included within teaching and policed by peers. Our research explores the discourses of gender and sexuality within current education. Specifically, we were interested in documenting the discourses of gender and sexuality drawn upon by students and teachers, and exploring the implication of these discourses on the inclusivity of school environments. Interviews were conducted with 9 teachers and 12 students at four high schools within the South Island of New Zealand. The interviews were analysed using Foucauldian discourse analysis to identify the discourses of gender and sexuality drawn upon within these education environments. Discourses are defined as the way language creates social understandings of concepts like gender and sexuality and the power and privileging of certain identities within these social understandings. Within societies there are dominant discourses, which are widespread ways a concept is understood, there are also discourses that challenge or resist these dominant ideas. The analysis identified that dominant discourses of binary gender and heteronormativity were common within the schools, but there was also resistance to these discourses. This resistance was commonly enacted by drawing on discourses of diversity that acknowledge a range of gender expressions and sexualities. Our research is useful in identifying practical ways that dominant discourses are challenged within schools. Ideally this knowledge will allow more resistance to dominant discourses within education environments and slowly create new dominant discourses more inclusive of diversity.

Taking photos of a crime may lead to overconfidence in eyewitness memory

A.J. Mills, A. Spies, and R. Zajac

Department of Psychology, University of Otago

Until recently, witnesses to crimes had few tools at their disposal to help them to remember their experiences accurately. Nowadays, however, witnesses are often armed with smartphone devices and digital cameras that can capture their surroundings with the click of a button. While some research has been carried out on the effect of photo-taking on memory for objects (Henkel, 2014; Barasch, Diehl, Silverman, & Zauberger, 2017), research has yet to address a more forensically-relevant issue: how taking photos could influence memory for how an event unfolded, and the perceived qualities of these memories. In the present study, 160 adults were presented with a short movie of a man at a flatwarming party. During the movie, participants witnessed the man spiking a woman's drink and then later stealing a wallet. As they watched, participants were asked to either take photos at certain points, or to simply frame photos without actually taking them. Later, participants were interviewed about the two crimes in the movie, and rated their confidence, vividness, coherence, and the ease of retrieving their memories of each event. The results of the present study indicated that the act of taking photos had no discernible effect on the amount and accuracy of information recalled by participants about the two crime events. However, taking photos did make participants more confident in their memory for the wallet stealing event, and they rated their recollections of this event as easier to retrieve, more vivid, and more coherent. Interestingly, this effect was not found for the drink spiking event. These findings and the potential implications of overconfident eyewitnesses will be discussed.

The effect of gender congruency on visual perspective taking

M. Colombo and J. Halberstadt

Department of Psychology, University of Otago

For the past decade, theory of mind (ToM) research has focused on two primary questions: At which age do children develop the concept of belief, and the additional cognitive skills that are required to use ToM? More recent studies, however, suggest that even with conceptual understanding and cognitive skills, adults do not always use their ToM, and research has begun to examine the conditions under which they are more likely to do so. We examined one condition – in-group status – using a visual perspective taking task based on Dumontheil et al.'s (2012) “director task.” Male and female participants whose gender had been made salient viewed a 3x3 grid on the computer. On the other side of the grid is a director who instructs the participant to click on items in the grid. Although the participant can see all items in the grid, the director has a limited perspective of the items in the grid such that on some trials, the answer from the participant’s perspective is not the correct answer from the director’s perspective. Male and female participants were randomly assigned to play against either a male or female director. Results indicated that participants made significantly more errors when they played with a director of the same gender versus the opposite gender. These effects may be due specifically to the relationship between men and women or a general in-group/out-group bias.

Older adults' emotion recognition unaffected by stereotype threat

L. Atkinson, J.E. Murray, and J. Halberstadt

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Stereotype threat involves reminding people about the stereotypes of a group that they belong to, which can negatively impact their performance on relevant tasks. For example, research has shown that reminding older adults aged over 65 about negative aging stereotypes (e.g., cognitive abilities decline with age) leads to worse performance on various physical, memory, and cognitive tasks. The aim of the present study was to see whether older adults' emotion recognition ability – a cognitive skill shown to decline with age – is affected by stereotype threat. Older adults aged over 65 and young adults aged 18-30 were randomly assigned to one of three stereotype threat conditions: 'Older threat' (study information included statements like "it is widely believed that emotion recognition decreases with age), 'Young threat' (e.g., "it is widely believed that emotion recognition increases with age), and 'Control' (age differences not mentioned). They then completed a basic emotion recognition task that involved matching emotion labels (disgust, fear, anger, happiness, sadness) to young and older faces' expressions. Finally, they rated how threatened they were during the experiment on a scale of 1-7 (e.g., "Were you worried that your ability to perform well on these tasks was affected by your age?"). In keeping with previous research, older adults were worse than young adults at recognising anger (young faces only), fear (young and older faces), and happiness (old faces only). Both young and older adults' self-reported threat was higher in the condition in which it was implied that their age group should do worse, compared to control. However, this perceived stereotype threat did not affect either age groups' emotion recognition accuracy. Unlike other cognitive abilities, older adults' emotion recognition may be resilient against stereotype threat.

Basic sense of self in youth at high risk for developing schizophrenia

H. Hazan, R. Linscott, and E. Reese

Department of Psychology, University of Otago

According to the self-disorder model, impairment of the basic sense of self precedes clinical symptoms and is independent of them. It was hypothesised that youth at high psychometric risk for developing schizophrenia would present an impairment in their basic sense of self, as measured by levels of ego strength, basic symptoms, and pronoun usage. Eighty undergraduate students aged 19–22 years ($M = 20.83$ years, $SD = 1.28$ years) completed the Schizotypal Personality Questionnaire (SPQ), Ego Strengths Questionnaire (ESQ), a self-report version of Schizophrenia Proneness Instrument (SPI-A), and four written narratives about personal and fictional experiences. Based on the SPQ scores, participants were allocated to either control (at or below the 84th percentile on all three subscales) or study group (above the 90th percentile on at least one subscale). To obtain the linguistic dimension of pronoun usage in the written narratives, the essays were subjected to Linguistic Inquiry. Compared to the control group, the high-risk group presented lower levels of ego strength, higher levels of basic symptoms, and used more personal pronouns and the *they* pronoun in narratives. Self-report on the SPI-A and ESQ correlated significantly with the objective lexical pattern of pronoun use: Lower ego strength correlated with greater use of *they* and more self-reported basic symptoms correlated with greater use of pronouns overall, personal pronouns, and the pronouns *she* and *they*. Ego strength had the most predictive power for group membership. Consistent with the self-disorder model of schizophrenia, youth at high psychometric risk for schizophrenia present a somewhat diminished sense of basic self that is evident in both self-report and objective measures.

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