

JIRIRI

Journal sur l'identité, les relations interpersonnelles et les relations intergroupes
Journal of Interpersonal Relations, Intergroup Relations and Identity

Volume 7, Hiver 2014 / Winter 2014

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Une initiative des étudiants au baccalauréat en psychologie
An initiative of undergraduate psychology students

Le *Journal sur l'identité, les relations interpersonnelles et les relations intergroupes* (JIRIRI) est une revue scientifique internationale concernant le monde de l'identité et des interactions sociales. La mission du JIRIRI est de permettre aux étudiants de premier cycle de vivre l'expérience complète de la démarche scientifique, de la mise sur pied d'idées originales jusqu'à leur diffusion, par le biais d'un processus de révision par un comité de pairs.

The *Journal of Interpersonal Relations, Intergroup Relations and Identity* (JIRIRI) is a scientific journal distributed internationally in the field of identity, interpersonal and intergroup relations. The mission of the JIRIRI is to offer undergraduate students a unique opportunity to fully experience the scientific method, from the development of original ideas to their diffusion, through the peer review process.

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Mission

Le *Journal sur l'identité, les relations interpersonnelles et les relations intergroupes* (JIRIRI) est une revue scientifique internationale publiée annuellement en avril. La mission du JIRIRI est de permettre aux étudiants de premier cycle de faire l'expérience complète de la démarche scientifique, de la mise sur pied d'idées originales jusqu'à leur diffusion, par le biais d'un processus de révision par les pairs.

Le JIRIRI vise également à promouvoir la création et l'expression de nouvelles idées théoriques sur les thèmes de l'identité et des interactions sociales — idées qui pourront éventuellement devenir les prémisses solides de futurs travaux de plus grande envergure.

Le JIRIRI publie des articles théoriques et empiriques. Ainsi, tout étudiant de premier cycle en psychologie ou dans un domaine connexe désirant approfondir et diffuser des idées ou des résultats portant sur les thèmes de l'identité, des relations interpersonnelles ou intergroupes est invité à soumettre un manuscrit.

Processus de révision

Dès leur réception, la rédactrice en chef effectue une première sélection des manuscrits en ne conservant que ceux qui correspondent à la mission du JIRIRI. Ensuite, le processus d'évaluation par les pairs débute par l'envoi du manuscrit à quatre étudiants de premier cycle et à un étudiant des cycles supérieurs. Ces étudiants rédigent une lettre d'évaluation anonyme destinée à l'auteur, qu'ils enverront à un membre de l'équipe éditoriale responsable du suivi du manuscrit.

Le responsable du manuscrit fera la synthèse de ces lettres dans une lettre d'édition destinée à l'auteur. La rédaction de la lettre d'édition sera supervisée par les éditeurs consultants, étudiants aux cycles supérieurs. La lettre d'édition devra souligner les critiques les plus importantes et rendre la décision concernant la publication de l'article. L'article peut être accepté, accepté avec révisions mineures, rejeté avec invitation à soumettre à nouveau ou rejeté.

L'auteur apportera alors les modifications suggérées par le comité de rédaction. Le processus de révision et de correction se poursuivra ainsi jusqu'à ce que le manuscrit soit jugé satisfaisant pour fin de publication.

Consignes pour la soumission d'un manuscrit

Les étudiants de premier cycle de toute université sont invités à soumettre leur manuscrit en français ou en anglais. Dans sa lettre à la rédactrice en chef, l'auteur qui soumet un manuscrit devra confirmer qu'il est

présentement étudiant au premier cycle et que son article n'a pas déjà été publié ou soumis pour publication dans un autre journal scientifique. Un étudiant au baccalauréat peut soumettre un article qu'il a coécrit avec un professeur ou un étudiant aux cycles supérieurs, mais il doit impérativement en être le premier auteur. Il est impossible de soumettre un article au JIRIRI en tant que premier auteur si le baccalauréat a été complété plus de six mois avant la soumission du manuscrit.

La première page du manuscrit devra contenir le titre de l'article ainsi qu'un titre abrégé de **45 caractères maximum**. La deuxième page devra contenir un résumé de l'article de **150 mots**. De plus, l'auteur devra fournir **5 mots-clés** en lien avec les thèmes abordés dans l'article. Le texte doit contenir **au maximum 7 500 mots et respecter les règles de l'APA**.

Pour s'impliquer au sein du JIRIRI

Les étudiants de premier cycle qui souhaitent soumettre un manuscrit et les étudiants de premier cycle et des cycles supérieurs qui souhaitent s'impliquer dans le processus de révision en tant qu'évaluateurs sont invités à nous contacter au jiriri@umontreal.ca.

Pour de plus amples renseignements, veuillez consulter notre site Internet: www.jiriri.ca.

Adresse postale

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Mission

The *Journal of Interpersonal Relations, Intergroup Relations and Identity* (JIRIRI) is an international scientific journal published annually in April. The mission of the JIRIRI is to offer undergraduate students a unique opportunity to fully experience the scientific method from the development of original ideas to their diffusion, through the peer review process.

The JIRIRI also aims to promote the conception and expression of new theoretical ideas in the fields of identity, interpersonal and intergroup relations — ideas that could eventually become solid bases for large-scale studies.

The JIRIRI publishes both theoretical and empirical articles. Thus, any undergraduate student in psychology or in a related field eager to share and refine his or her ideas or results pertaining to identity, interpersonal or intergroup relations is invited to submit a manuscript.

Reviewing Process

First, the Editor in Chief makes a preliminary selection of the manuscripts and retains those that comply with the JIRIRI's mission. Then, the manuscripts are sent to four undergraduate students and one graduate student. These students will write anonymous reviews to the author and send them to a member of the editorial team responsible of the manuscript.

The editorial team member will write an edition letter to the author, which will synthesize the reviewers' comments. This process will be supervised by the consulting editors, who are graduate students. The edition letter must contain the most important comments and the decision regarding publication. The manuscript may be accepted as it is, accepted with minor modifications, rejected with the invitation to resubmit, or it may be rejected completely.

The author will then carry out the modifications considered necessary by the editorial board. Several rounds of reviews may be undertaken until the article is judged suitable for publication.

Guidelines for submitting an article

Undergraduate students of all universities are invited to submit their article in French or in English. In his/her letter to the Editor in Chief, the author submitting an article must confirm that he/she is an undergraduate student and that his/her article has neither been published nor submitted for publication elsewhere. An undergraduate student may submit an article that he/she

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has co-written with a professor or a graduate student only if he/she is first author. It is not possible to be the first author of an article in the JIRIRI if one's undergraduate degree was completed more than six months prior to the submission of the manuscript.

The cover page must include the title of the article and a running head **not exceeding 45 characters**. The second page must include an abstract of **150 words** and the author must also provide **five keywords** that describe the subject of the article. The text must contain a **maximum of 7,500 words and conform to APA standards**.

To participate in the JIRIRI

Any undergraduate student interested in submitting a manuscript, or any undergraduate or graduate student interested in taking part in the review process is invited to contact us at the following address:
jiriri@umontreal.ca.

For more details, please consult our website at the following address: www.jiriri.ca.

Postal Address

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Remerciements

Nous tenons d'abord à remercier le Département de psychologie de l'Université de Montréal et son Directeur, Monsieur Serge Laroche ainsi que l'Association étudiante de psychologie de l'Université de Montréal (AGÉPUM), Monsieur Gyslain Giguère et les membres du comité organisateur de la 8^e Journée scientifique du Département de psychologie de l'Université Montréal. Nous remercions également Madame Sophie Dubois du service d'impression de l'Université de Montréal. Un merci tout spécial à Jean-François Gagnon, grâce à qui le JIRIRI était présent au congrès *Société québécoise de recherche pour la psychologie* (SQRP). De même, nous tenons à souligner la contribution financière du *Fonds de recherche du Québec - société et culture* (FRQSC), par l'entremise d'une subvention de soutien aux équipes de recherche intitulée « Identité et dysfonction sociale » (2013-SE-164404). Finalement, merci à Julien Blanchard pour son assiduité à faire connaître notre revue scientifique au sein de l'Université de Montréal.

Nous remercions tous les étudiants qui ont collaboré au *Journal sur l'identité, les relations interpersonnelles et les relations intergroupes* (JIRIRI). Cette édition n'aurait pu voir le jour sans la collaboration de tous ces étudiants dévoués qui ont contribué au succès du JIRIRI. Par ailleurs, nous exprimons notre reconnaissance à nos collègues du *Laboratoire de recherche sur les changements sociaux et l'identité* (CSI).

Sur une note un peu plus personnelle, nous tenons à remercier Roxane de la Sablonnière pour son appui continual et pour cette idée novatrice qui a permis à plus d'une centaine d'étudiants par année de se familiariser avec le domaine de la recherche et de la publication scientifique. Ainsi se concrétise son dictum favori : « Ce sont les idées qui changent le monde ». Finalement, nous aimeraisons remercier Émilie Auger, Laura French Bourgeois, Melissa Stawski, Anne Gendreau, Mariam Najih et Marie-Josée Leclerc, les rédactrices en chef des éditions précédentes, qui continuent d'agir en tant que guides.

Acknowledgments

We would first like to express our gratitude to the Department of Psychology at the University of Montreal and to its Director, Dr. Serge Laroche. We would also like to thank the psychology student council (AGÉPUM) as well as Mr. Gyslain Giguère and the members of the organizing committee of the 8^e *Journée scientifique du Département de psychologie* at the University of Montreal. We also thank Ms. Sophie Dubois of the University of Montreal's printing services. A special acknowledgement to Jean-François Gagnon, thanks to whom the JIRIRI was present at the *Société québécoise de recherche pour la psychologie* (SQRP). We would also like to acknowledge the financial contribution from the *Fonds de recherche du Québec - société et culture* (FRQSC) team grant entitled "Identity and social dysfunctions" (2013-SE-164404). Lastly, thanks to Julien Blanchard for his diligence to make our scientific journal well known to the population of University of Montreal.

We thank all the students who worked with the *Journal of Interpersonal Relations, Intergroup Relations and Identity* (JIRIRI) this year. This volume would not have existed without the participation of all the devoted students who contributed to its success. We also express our gratitude to our colleagues at the *Social Change and Identity Laboratory* (CSI).

Finally, on a more personal note, our heartfelt thanks goes to Dr. de la Sablonnière for her continuous support and for her innovative ideas which have provided over a hundred students each year with the opportunity to be involved in research and publication by participating in the JIRIRI. Indeed, this embodies her favourite saying, "Ideas change the world". We would also like to thank Émilie Auger, Laura French Bourgeois, Melissa Stawski, Anne Gendreau, Mariam Najih and Marie-Josée Leclerc, the previous Editors in Chief, who frequently offered guidance.

Éditorial

AMÉLIE PRIVÉ

Université de Montréal



C'est avec fierté que je vous présente le volume 7 du *Journal sur l'identité, les relations interpersonnelles et les relations intergroupes* (JIRIRI), une revue scientifique avec comité de lecture destinée aux étudiants du baccalauréat. Depuis les 7 dernières années, l'équipe du JIRIRI ne fait qu'accroître et représente aujourd'hui une collaboration entre 76 universités à travers 15 pays.

Pour le volume 7, un total de 12 manuscrits ont été soumis, et 7 d'entre eux ont été acceptés amenant le taux de rejet de cette présente édition à 42%. Par ailleurs, 6 manuscrits additionnels ont été soumis, mais puisque ceux-ci ne rencontraient pas les critères de base de soumission, ils n'ont pas été considérés dans les statistiques de rejet. Cependant, compte tenu des idées très intéressantes abordées dans ces manuscrits, nous invitons les auteurs à resoumettre leur manuscrit retravaillé pour le volume 8.

Cette année, comme à chaque année, l'objectif principal était d'augmenter la qualité des manuscrits publiés. Par ailleurs, pour le volume 7, l'obstacle à surmonter fût de guider l'équipe éditoriale grandissante. En effet, celle-ci comptait 19 étudiants au baccalauréat et aux cycles supérieurs en plus de l'équipe d'évaluateurs, qui comptait plus de 50 membres. Étant donné son ampleur et sa diversité, il a été primordial de trouver des moyens efficaces de formation, afin que les manuscrits soient évalués de manière uniforme. C'est pourquoi, nous avons mis sur pied des nouveaux outils, autant pour les membres du comité éditorial que pour les évaluateurs. Ceux-ci ont pris la forme de documents spécifiant les critères d'évaluation ainsi que des changements dans les

formations. Cela a démontré des résultats satisfaisants quant au jugement critique des évaluations ainsi que sur la qualité des lettres d'édition.

Dans le futur, notre mission sera d'améliorer l'unité entre les membres de l'équipe éditoriale et les évaluateurs. Ceci nous permettra d'être plus près des besoins de tous, ce qui augmentera la qualité des articles publiés. En effet, en ayant de meilleures communications entre ces deux équipes, il sera plus facile de développer l'esprit critique des évaluateurs du JIRIRI. Ainsi, les évaluateurs seront mieux formés pour critiquer les manuscrits en profondeur. Pour ce faire, des moyens utilisant les technologies actuelles peuvent nous aider. Des vidéo-conférences et des webinaires peuvent être organisés afin de diriger l'équipe du JIRIRI vers une même direction.

Sur une note plus personnelle, j'aimerais remercier Roxane de la Sablonnière, Ph. D., qui depuis le début du JIRIRI apporte ses précieux conseils. De plus, je tiens à mentionner le soutien de Diana Cárdenas, M. Sc., qui a su avec constance épauler les rédacteurs adjoints ainsi que moi-même. Finalement, merci au comité éditorial pour son excellent travail jusqu'à la fin, et aux évaluateurs sans qui le JIRIRI ne pourrait exister. Merci à toute cette fabuleuse équipe!

Editorial

AMÉLIE PRIVÉ
Université de Montréal



It is with great pride that I present you the 7th Volume of the *Journal of Interpersonal Relations, Intergroup Relations, and Identity* (JIRIRI), a scientific review intended for undergraduate students. In the last 7 years, our team has grown considerably and today fosters a collaboration between 76 universities in 15 different countries.

For the 7th Volume of the JIRIRI, a total of 12 manuscripts were submitted; 7 of them were accepted, which brings the rejection rate of the present edition to 42%. Six additional manuscripts were submitted but, since they did not meet our basic submission criteria, were rejected before entering the review process. These manuscripts were not accounted for when calculating our rejection statistics. Since they still highlight some interesting ideas, we welcome their authors to resubmit versions of their articles for the 8th Volume.

This year, the main objective was improving the quality of our articles. Leading a larger team represented a significant challenge that had to be overcome in order to achieve this aim. This year's team represented a total of 18 undergraduate and graduate students in the editorial board, and more than 50 in the reviewing team. Given its size and diversity, finding effective training methods so that all manuscripts would be revised in a uniform way was crucial. Therefore, we promoted new tools which proved beneficial: new documents specifying our evaluation criteria and training methods were created. They were offered to evaluators and associate editors. These changes produced satisfactory results mirrored in a developed sense of critical thinking as well as a great improvement in the quality of editorial letters.

Henceforth, our mission will focus on unifying our editorial team members and evaluators. This will allow us to stay aware of the needs of our team which keeps growing. Maintaining a close-knit team will lead to articles of greater quality for two reasons. First, an improved communication between our editorial team and evaluators will greatly benefit the latter's critical thinking and therefore strengthen the content of evaluations. Second, it will reinforce our members' sense of belonging to the JIRIRI and make the process more enjoyable. To achieve this, today's growing use of technology may prove useful. Video conferences, online trainings, and webinars could be introduced in order to help refocus our team in one same direction.

On a more personal note, I would like to thank Roxane de la Sablonnière, Ph. D., who, since the very beginning of the JIRIRI, has bestowed us with constructive feedback and advice. I would also like to thank Diana Cárdenas, M. Sc., who proved to be a constant help to our associate editors as well as myself. I extend my thanks to all the members of the editorial team for their excellent work from beginning to end as well as the evaluators without whom the JIRIRI could not exist. Special thanks and regards to our amazing team!

Lettre des rédactrices adjointes sénières

DIANA CÁRDENAS, M. SC., & ROXANE DE LA SABLONNIÈRE, PH. D.

Université de Montréal



C'est avec fierté que nous vous présentons le volume 7 du *Journal sur l'identité, les relations interpersonnelles et les relations intergroupes* (JIRIRI). Des résultats impressionnantes furent observés grâce aux efforts fournis par nos membres qui ont travaillé de concert afin de produire une revue scientifique de qualité exceptionnelle. Cette année, le volume présente d'excellents articles qui introduisent une multitude de sujets différents tels le biculturalisme ou encore les processus cognitifs implicites. Nous sommes également fiers que nos efforts aient donné plus de visibilité au JIRIRI à l'international. Celui-ci a su rejoindre plus de 76 universités dans 15 pays.

Un des grands changements cette année est l'augmentation significative de la taille de notre comité de rédaction, la plupart de nos nouveaux membres étant des étudiants au premier cycle. Ceci, bien entendu, est conforme à l'un des objectifs du JIRIRI qui est d'encourager les étudiants au baccalauréat à développer leur pensée critique et leurs capacités en recherche. En effet, le JIRIRI a pour mission de donner aux étudiants du baccalauréat l'opportunité d'acquérir de l'expérience pratique sur la recherche, de rédiger des articles scientifiques et de présenter des idées de façon claire. Ceci représente un privilège, car de telles

occasions au baccalauréat sont rares au sein de la communauté scientifique. Néanmoins, l'objectif du JIRIRI est de permettre aux auteurs et aux membres du comité éditorial de vivre l'expérience complète de la publication scientifique. Nous avons foi en la capacité des auteurs, éditeurs et collaborateurs à travailler ensemble et sommes persuadés que les résultats générés par cette coopération contribueront grandement aux domaines de l'identité, des relations interpersonnelles et intergroupes. Indéniablement, être témoins de l'amélioration des articles soumis, des lettres de nos éditeurs ainsi que la mise en œuvre d'une pensée critique tout au long du processus de révision par les pairs représente notre plus important accomplissement.

Il est certain que notre comité de rédaction a énormément appris tout au long de cette expérience enrichissante. C'est en travaillant étroitement ensemble que nous avons été capables de transformer des idées intéressantes en articles de qualité supérieure. Les efforts importants fournis par tous ceux et celles impliqués dans le processus de publication, et l'excellente qualité du présent volume, nous convainc que nous sommes capables de changer le monde, une idée à la fois.

Letter from the Senior Associate Editors

DIANA CÁRDENAS, M. SC., & ROXANE DE LA SABLONNIÈRE, PH. D.
Université de Montréal



We are proud to present the 7th Volume of the *Journal of Interpersonal Relations, Intergroup Relations, and Identity* (JIRIRI).

Today's volume is the result of the efforts put forwards by our team members who worked together in concert to make a final product of great quality. This year's volume brings forward excellent articles that focus on diverse subjects, ranging from biculturalism to implicit cognitive processes. We are also very proud of the increased international visibility of the JIRIRI. It has now reached over 76 different universities in 15 countries.

One of the biggest changes we experienced this year was a substantial increase in the editorial team's size with most of our new members being students at the undergraduate level. This, of course, is congruent with one of the main pillars of the JIRIRI, which is to engage undergraduate students' critical thinking and to develop their research abilities.

We wish to provide undergraduate members with the opportunity to acquire hands-on experience on how to conduct research, write scientific articles, and express novel ideas with a sense of clarity and coherence. This is a great privilege in a research world were such opportunities at the undergraduate level are very rare

and unique. Indeed, the JIRIRI is a place of learning for authors and students who generously take part of the editorial committee. We believe in the ability of authors, editors, and reviewers to work closely together and to contribute to the field of identity, interpersonal, and intergroup relations. Undeniably, there is no greater privilege for us than to see the evolution of the articles, edition letters and, most importantly, the critical thinking of the students involved in the JIRIRI.

Our editorial board has greatly matured throughout the last year and by working closely together, they were able to transform great ideas into high quality articles. The efforts contributed by every individual involved in this year's publication and the excellent quality of the Volume 7 will convinces us more than ever that we can change the world, one idea at the time.

Processus de révision par les pairs

Le JIRIRI a mis au point un processus de révision par un comité de pairs adapté aux étudiants universitaires de premier cycle. Chaque membre de l'équipe éditoriale possède des tâches précises, qui visent l'apprentissage et le développement de compétences liées au domaine de la publication scientifique. L'équipe éditoriale est guidée par la *rédactrice en chef*, qui assure le bon déroulement du processus de révision et de publication tout en respectant l'échéancier. Les tâches du *chef d'édition* consistent à mettre à jour les documents du JIRIRI, à organiser des ateliers de formation pour les évaluateurs, et à superviser le mise en page du JIRIRI. La *directrice des communications* est responsable de la promotion et du financement. Par exemple, elle rédige des demandes de bourses pour permettre la publication et l'expansion du JIRIRI. Les *rédacteurs adjoints* sont responsables du processus de révision et de publication d'une partie des manuscrits soumis.

Le processus d'évaluation des manuscrits se déroule en trois étapes. La rédactrice en chef amorce le processus en effectuant une sélection parmi les manuscrits soumis, puis envoie ces manuscrits aux rédacteurs adjoints. Ceux-ci s'assurent que tous les manuscrits font d'abord l'objet

d'une évaluation par cinq *évaluateurs*, quatre étudiants de premier cycle, et un *évaluateur invité*, étudiant aux cycles supérieurs. Suite à ces évaluations, un des membres du comité éditorial prend en charge l'intégration de l'ensemble des commentaires formulés afin de fournir à l'auteur une synthèse des commentaires par le biais d'une *lettre d'édition*. Ensuite, les *éditeurs consultants*, des étudiants aux cycles supérieurs ou des étudiants ayant complété leurs études de premier cycle, passent en revue les lettres d'édition dans le but de mieux guider les auteurs et de superviser le travail des éditeurs. De plus, Roxane de la Sablonnière, Ph. D., et Diana Cárdenas, M. Sc., agissent à titre de *rédactrices adjointes séniors* et supervisent tout le processus en collaboration avec la rédactrice en chef. Suite à une nouvelle soumission du manuscrit par l'auteur, de nouveaux tours d'évaluation se déroulent selon le même principe jusqu'au moment où l'article est jugé convenable pour fin de publication. Plus le processus de révision avance, plus les modifications exigées deviennent spécifiques et détaillées. Ainsi, le premier tour vise principalement à s'assurer de la contribution scientifique du manuscrit. Puis, les étapes subséquentes visent l'amélioration d'aspects précis tels que la correction des analyses statistiques. Durant la totalité du processus, l'équipe éditoriale s'engage à offrir de l'aide et du soutien aux auteurs. Grâce à la collaboration de tous ces gens, le JIRIRI peut atteindre ses objectifs et sa mission.

Peer-review process

The JIRIRI has developed a peer-review process that has been adapted for university undergraduate students. Each member of the JIRIRI team is responsible for specific tasks that aim at developing important skills in the field of scientific publication. The editorial board is guided by the *Editor in Chief*, who ensures the smooth progress of the review and correction process by encouraging other team members to respect deadlines. The tasks of the *Managing Editor* consist of updating JIRIRI's documents, organizing workshops for reviewers and supervising the page layout of the JIRIRI. The *Communications Director* promotes and finds financing for the JIRIRI. For example, he/she submits grant applications that allow for the publication and expansion of the JIRIRI. The *Associate Editors* are responsible for the review and publication process of some of the submitted articles.

The review process has three parts. First, the Editor in Chief makes a preliminary selection of the manuscripts, retaining those that comply with the JIRIRI's mission, and sends them to the Associate Editors. The Associate Editors ensure that all articles are reviewed by four undergraduate

reviewers and one *guest reviewer*, who must be a graduate student. Following the reception of the reviews, the Associate Editor provides a summary of the comments to the manuscript's author in an *Editor's Letter*. In addition, the *Consulting Editors*, graduate students or students who have finished their undergraduate degree, review the editor's letter to provide guidance to the authors and the editor in charge of the paper. The entire process is supervised by the *Senior Associate Editors*, Roxane de la Sablonnière, Ph. D., and Diana Cárdenas, M. Sc., in collaboration with the Editor in Chief. Several rounds of reviews may be undertaken until the manuscript is judged suitable for publication. As the review process moves from the first to the last round of reviews, the comments and modifications required become more precise and detailed. At first, the reviewing process ensures the overall scientific contribution of the paper. Then, subsequent rounds are aimed at improving more precise and detailed aspects; such as statistical analyses. Throughout the entire process, the editorial team is readily available to offer help and support to the authors. Thanks to the collaboration of the entire team as well as the authors, the JIRIRI has been able to reach its goals and mission.

The Effect of Interlocutor Status on Second Language Anxiety and Spoken French Proficiency

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This study examined the effect of interlocutor status on the second language anxiety (SLA), spoken French proficiency (spoken FP), and perceived French proficiency (perceived FP) of students with French as a second language. Participants were asked by a Francophone professor (high status) or a Francophone peer (low status) to complete an oral task in French. It was predicted that high status would cause higher SLA, lower spoken FP, and lower perceived FP in participants than low status. Although hypotheses were not supported, regression analysis revealed that perceived FP marginally moderates the relationship between status and SLA. Participants with low perceived FP were more anxious when speaking to the peer as opposed to the professor than participants with high perceived FP. This finding was further supported by a negative correlation between perceived FP and SLA. Results are discussed in the context of negative evaluation and self-confidence.

Keywords: second language anxiety, interlocutor status, language proficiency, negative evaluation

Cette étude a examiné l'effet du statut de l'interlocuteur sur l'anxiété de langue seconde (ALS), la maîtrise du français parlé (MF parlé) et la maîtrise du français perçue (MF perçue) d'élèves ayant le français comme langue seconde. Les participants furent évalués par un professeur (statut élevé) ou un collègue (statut faible) francophone sur une tâche de français oral. Il fut prévu qu'un statut élevé entraînerait une ALS supérieure et une MF parlée et perçue inférieures à celles entraînées par un statut faible. Bien que les hypothèses furent infirmées, une régression hiérarchique révéla que la MF perçue modère le lien entre le statut et l'ALS. Les participants ayant une faible MF perçue étaient plus anxieux lorsqu'évalué par un collègue que par un professeur. Ceci fut soutenu par une corrélation négative entre la MF perçue et l'ASF. Les résultats sont discutés dans un contexte d'évaluation négative et de confiance en soi.

Mots-clés : anxiété de langue seconde, statut de l'interlocuteur, maîtrise langagière, évaluation négative

Foreign language anxiety or second language anxiety (SLA), established as an independent construct distinct from other forms of anxiety, is defined as the anxiety an individual experiences in second language learning situations (Horwitz, Horwitz, & Cope, 1986; MacIntyre, 1992). Similar to test or public speaking anxiety, SLA is a situation-specific anxiety where the individual experiences a “subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system”(Horwitz,

2001, p.113) whenever engaging in second language activities (Horwitz, 2001; MacIntyre, 1992). It is important to study second language constructs such as anxiety, because they involve interpersonal contacts related to the Canadian intergroup context (i.e., contact between Anglophones and Francophones). The present study, conducted in a Canadian context, was specifically interested in SLA and spoken proficiency for individuals with French as a second language.

In the literature, SLA is consistently negatively correlated with second language proficiency and achievement (Aida, 1994; Gardner & MacIntyre, 1993; Hewitt & Stephenson, 2012; Horwitz, 1986, 2001; Kim, 1998; MacIntyre, 1992; MacIntyre & Gardner, 1991; Phillips, 1992). This association is present for

This work was part of an honours thesis project completed by the first author under the supervision of the second author at Glendon College, York University. A special thanks is extended to Evelina Lou for her help with the data analyses. Please address correspondance to Kirstyn Krause (email: kirstyn_krause@hotmail.com).

many target languages and across various levels of language instruction (Horwitz, 2001; Tóth, 2009). More specifically, SLA has been associated with impairments in comprehension, lower word production, listening deficits in vocabulary learning, reduced course grades, and lower standardized test scores (MacIntyre & Gardner, 1994). Past research suggests that of all the second language activities, tasks that measure spoken proficiency are associated with higher levels of SLA (Hewitt & Stephenson, 2012; Kim, 1998; MacIntyre, 1992; Philips, 1992). One limitation of this correlational research is its inability to identify additional factors that may be influencing SLA and spoken proficiency. Establishing causation between a particular social factor and SLA or spoken proficiency will provide a clearer picture into the contexts in which anxiety develops and persists in second language communication.

One important social factor in need of investigation is that of interlocutor status. In other words, how does the identity of the native speaker (expertise, authority, and manner of communication) influence the SLA and spoken proficiency of the second language speaker? Because language learning often takes place in a social setting where communication with other individuals is required, interlocutor status is an important variable to study in second language interaction. Moreover, interlocutor status is important in contexts where interpersonal and intergroup communication between individuals of different status is necessary (i.e., proficiency at job interviews, or performance at public speaking forums such as public debates or conferences; see Tajfel & Turner, 1986).

The relevance of studying interlocutor status in second language contexts can be understood by exploring two underlying conceptualizations of SLA. First, SLA has been viewed as a result of actual or perceived negative evaluation from the interlocutor (Horwitz et al., 1986). Second, high levels of SLA have been attributed to low levels of self-confidence (Clément, Major, Gardner, & Smythe, 1977).

Negative Evaluation

Horwitz et al. (1986) have attributed SLA to a fear of negative evaluation. Whether perceived or real, evaluation puts pressure on the individual to perform well and avoid errors. The underlying assumption is that performance mistakes will result in negative evaluation. Students report that language learning courses are among the most anxiety-provoking

learning situations (MacIntyre, 1992), which makes sense when one considers the emphasis on evaluation in second language classes (i.e., testing, oral exams, and ongoing participation).

Palacios (1998) found that students felt more comfortable speaking their second language outside of class than they did in class. Students stated that SLA in class was due to the fact that they were being evaluated. One assumption in this past finding is that the relationship between the second language speaker and the interlocutor differs in a classroom setting compared to a natural setting. In class, communication is based on evaluation and performance. In contrast, outside the classroom, communication is based on the need or the desire to converse with someone who is typically a native speaker.

Self-Confidence

Researchers have also explored the relationship between self-confidence and SLA. Second language self-confidence has been defined as a combination of high perceived language proficiency and low levels of language anxiety (Clément et al., 1977). A model by Clément (1986) proposes that self-confidence in one's second language is associated with the frequency and the quality of contact with native speakers. Contact that is pleasant and laid back increases an individual's perception of his or her second language ability, thus improving second language self-confidence. Contact that is disagreeable and anxiety-provoking has the opposite effect. On a conceptual level, it could be that a positive interaction with the interlocutor boosts participants' self-confidence, resulting in lower levels of SLA and higher levels of spoken proficiency.

In spite of the conceptual foundation for studying interlocutor status' effect on SLA, previous research on status is preliminary and inconclusive at best. To our knowledge, only two studies exploring the effect of interlocutor status on language anxiety (native or foreign) or spoken proficiency exist in the literature.

Hilmert, Christenfeld and Kulik (2002) studied the effect of interlocutor status, as defined by expertise in native language public speaking, on cardiovascular reactivity. Results showed higher levels of cardiovascular reactivity for participants giving a speech to expert judges than for participants giving a speech to novice judges. One limitation of this study is that the researchers only measured physiological reactions to stress, which is not

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necessarily synonymous with other methods of measuring SLA. Furthermore, they did not measure the proficiency or quality of the participants' speech.

The second study (Steinberg & Horwitz, 1986) examined the effect of interlocutor status, as defined by the interlocutor's manner of communication, on second language spoken proficiency. The experimenter either treated participants in a friendly or an unfriendly manner. The task involved describing three ambiguous pictures in the participant's second language. Participants in the unfriendly condition gave less interactive and elaborate descriptions of the ambiguous images than participants in the friendly condition. This study is limited because it measures the impact of interlocutor status on spoken proficiency, but not SLA.

The Current Study

In order to examine the ways in which interlocutor status predicts SLA and spoken French proficiency (spoken FP), the present study established SLA and spoken FP as outcome variables of status rather than simply focusing on the relationship between them, as past correlational research has done. Perceived French proficiency (perceived FP) was also established as an outcome variable in order to link results to Clément et al.'s (1977) construct of self-confidence, which is theoretically higher when participants have high perceived FP and low SLA. To distinguish between spoken FP and perceived FP, spoken FP refers to actual speaking ability when communicating in French (i.e., grammar, vocabulary, and fluency), whereas perceived FP refers to beliefs about communicative ability regardless of actual ability.

A better understanding of the influence of interlocutor status on SLA and spoken and perceived second language ability is important for second language learning contexts in and out of the classroom. This understanding could lead to the development of strategies that improve academic evaluation and language learning by diminishing the salience of anxiety-provoking factors, or by compensating for these factors by adding elements that reduce SLA and improve language proficiency.

Due to the differing definitions in past research, it is important to clearly define interlocutor status. In the current study, interlocutor status was defined as the interpersonal communication (distant versus friendly) between the interviewer (professor versus peer) and

the interviewee (student). The professor interlocutor represented high status. This was due to a higher level of education, elevated authority in the academic milieu, and expertise on the topic of conversation compared to the student. Furthermore, using professional language established a level of distance between the professor and the student. In contrast, the peer interlocutor represented equal status to the student given the similar level of education, authority, and expertise. The peer also communicated in a colloquial and a friendly manner.

The purpose of the study was twofold. The first goal was to examine how interlocutor status influences the spoken FP and the perceived FP of a second language speaker. More specifically, does speaking with a Francophone professor (high status) cause detriments to spoken FP and perceived FP compared to speaking with a Francophone peer (equal status)? The second goal was to explore whether interlocutor status causes differences in the level of SLA. In other words, does high versus low status cause SLA to increase and decrease respectively?

It was hypothesized that students who communicate with a Francophone professor would have higher SLA scores, lower spoken FP, and lower perceived FP compared to students who communicate with a Francophone peer. Furthermore, in line with the correlational research associating SLA with second language performance and achievement, it was predicted that SLA would be significantly negatively correlated with spoken FP and perceived FP. These hypotheses are illustrated in Figure 1.

Method

Participants

A final sample of 48 (43 female) undergraduate students, $M_{age} = 20.52$, $SD = 2.81$, was used for the present study. Five participants were dropped from the sample due either to early withdrawal from the study or insufficient spoken French ability. All participants were recruited from Introduction to Psychology, French Studies courses, and discipline courses taught in French at York University. Students from Introduction to Psychology ($n = 16$) received class credit for their participation. All other participants were entered into a draw to win a \$20 gift card. To take part in the study, participants needed to have a first language other than French and be able to speak French to the extent that they were willing to read

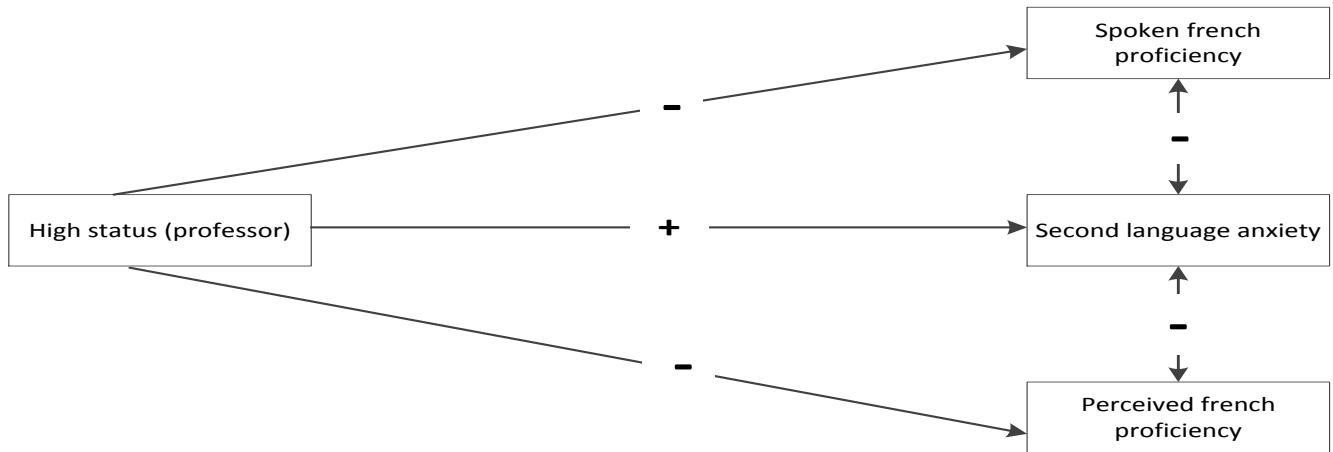


Figure 1. Illustration of experimental hypotheses. High status was expected to induce higher levels of SLA, lower spoken French proficiency, and lower perceived French proficiency.

aloud and communicate orally in French. In other words, participants could not be Francophone, but did not need to have English as their native tongue. Anglophone participants represented 71% ($n = 34$) of the final sample. Half of these anglophones ($n = 17$) spoke at least one other language in addition to French and English. First languages other than English included Spanish ($n = 3$), Pashto ($n = 2$), Arabic ($n = 1$), Bengali ($n = 1$), Greek ($n = 1$), Hebrew ($n = 1$), Hindi ($n = 1$), Polish ($n = 1$), Russian ($n = 1$), Romanian ($n = 1$), and Serbian ($n = 1$).

Procedure and Measures

The current study used a between-subjects experimental design to examine the effects of interlocutor status on SLA, spoken FP, and perceived FP. Interlocutor status, the independent variable, was manipulated by having participants with French as a second language watch a video of either a Francophone professor of high status or a Francophone peer of low status who asked participants to complete several communicative tasks in French. The same confederate was used for both professor and peer conditions, and was videotaped to control for extraneous differences between conditions.

Participants were randomly assigned to either the professor condition or the peer condition, and were individually tested. Participants were told that the study was about learning a second language in different contexts, and that it was being conducted in collaboration with a Francophone professor or a Francophone peer at the University of Nice, depending on the experimental condition. For the peer

condition, the participants were told that the Francophone peer was a good friend; someone the experimenter had met the previous year during a study abroad program. This was done to establish that the Francophone peer was (1) friendly, and (2) able and willing to interact with an anglophone (the experimenter). For the professor condition, no elaboration was given on the nature of the relationship. This was done to establish a level of professional distance between the Francophone professor and the participants. Next, participants were informed that the Francophone professor or Francophone peer was unable to meet with them in person, but that he had recorded a video explaining the project. All interaction with the experimenter was scripted and conducted in English. When needed, the experimenter answered any procedural or technical questions from the participants. Informed consent was obtained at the beginning of each session.

After agreeing to take part in the study, participants in both conditions were required to complete an online questionnaire, watch the interlocutor status manipulation video (professor or peer), read an article aloud, summarize the article in their own words, and respond to a question related to the article. Each part of the procedure was completed consecutively without time breaks. The experimenter remained in the room for the duration of the experiment to facilitate each task (i.e., start and stop the manipulation video, open and close the online questionnaire). All tasks, except for the online questionnaire, were performed in French. The following is a description of each component of the study.

Questionnaire part 1. In addition to collecting information about academic and social French experience, the online questionnaire measured perceived FP using two self-report measures. First, the Global French Proficiency Scale, created for the present study, was a 4-item measure ($\alpha = .88$) that asked participants to rate their perceived ability to speak, read, write, and understand French as either *excellent, very good, good, competent, or poor*. Second, a modified version of the Can-Do Scale, as used by Lalonde and Gardner (1984), and MacIntyre, Noels and Clément (1997) asked participants to report the difficulty level of several speaking, reading, writing, and comprehension tasks in French (i.e., the ability to understand French movies without subtitles). This modified measure is a 16-item, 7-point scale (1 = *very easy* to 7 = *very difficult*). This scale demonstrated excellent internal consistency ($\alpha = .91$).

Manipulation video. Next, participants were either shown the video of the Francophone professor or the Francophone peer. Both videos used the same confederate. In the Francophone professor video, the confederate was dressed in a suit, spoke in an authoritative tone of voice, and used the respectful French pronoun “*vous*” typically employed in an academic professor-student relationship. He spoke exclusively in French. The confederate introduced himself as a professor at the University of Nice, France with a doctorate in Linguistics. He shared several accomplishments including his presidency in the Association of Bilingualism and the publication of several academic articles. Next, he described the present study as a collaborative project committed to the advancement of bilingualism in Canada that he was working on in conjunction with several Canadian universities. All of these elements were meant to convey high interlocutor status.

In the Francophone peer video, the confederate was casually dressed, spoke in a colloquial and relaxed tone of voice, and used the French pronoun “*tu*” commonly used in peer relationships. Likewise, he spoke exclusively in French. The confederate introduced himself as an undergraduate Linguistics student at the University of Nice, France. He explained his involvement in the bilingual club on campus, which gave him the opportunity to practice his English. Next, he shared that he had decided to complete his thesis on bilingualism in collaboration with the experimenter of the present study, his friend and colleague. All of these elements were meant to convey low interlocutor status.

Experimental task. The experimental task was made up of three oral French tasks: reading an article, summarizing the article in one’s own words, and responding to a question about the article. The French article reported the tragic story of a teen suicide resulting from cyberbullying as well as from physical and sexual harassment. This controversial topic was chosen to facilitate participants’ formulation of opinionated responses.

After being asked to read and summarize the article aloud, the confederate asked participants whether or not one can attribute the responsibility of a cyberbullying incident like this to a particular person or source (i.e., the society, the child’s parents, the child him or herself, or the child’s classmates). To facilitate completion of the experimental task, all instructions were also displayed on a laptop following the video. Participants were video recorded while providing their responses.

Spoken FP. The spoken FP of each participant, identified by the recorded video responses, was scored by both the experimenter and a Francophone judge (a second year Psychology student) using the Spoken French Proficiency Scale, a collection of modified rating scales from the French version of the Common European Framework of Reference (CEFR; Council of Europe, 2001). This framework provides an explanation of the knowledge and skills needed to effectively communicate in French and defines progressive levels of proficiency in second language communication. Using a 5-point scale with corresponding descriptors of increasing proficiency, four elements of spoken FP were measured: general linguistic range (*étendue linguistique générale*), verbal fluency (*aisance à l’oral*), vocabulary control (*maîtrise du vocabulaire*), and grammatical accuracy (*correction grammaticale*) for a total score of 20. These four measures referred to the participants’ summary and opinion of the article. The scale received excellent internal consistency ($\alpha = .96$). In order to assess the efficacy of the coding system, the experimenter’s ratings of spoken FP, which were used in the subsequent analyses, were examined in relation to the Francophone judge’s assessment of responses. The inter-rater reliability for the mean of all four measures combined achieved a strong agreement, average measures ICC = .79, 95% CI [.62, .88].

Questionnaire part 2. Following the completion of the experimental task, participants completed the following measures online.

SLA. The SLA Scale used for the present study was an 8-item modified version of the Foreign Language Classroom Anxiety Scale (FLCAS) meant to measure the amount of anxiety felt in language learning situations (Horwitz et al., 1986). The FLCAS has been used in a variety of studies (Aida, 1994; Casado & Dereshiwsky, 2001; Hewitt & Stephenson, 2012; Horwitz, 1986; Horwitz et al., 1986; Kim, 1998; MacIntyre, 1992; Palacios, 1998; Phillips, 1992; Tóth, 2009). Original scale items reflect the test anxiety, communication apprehension, and fear of negative evaluation experienced in the context of the foreign or second language classroom. The modified SLA Scale asked participants to identify, on a 7-point scale, the extent to which they agreed or disagreed with a set of statements (i.e., I feel very self-conscious about my language performance). Each statement referred to the level of comfort or anxiety the participant felt when completing the experimental tasks. The scale demonstrated acceptable internal consistency ($\alpha = .78$).

Open-ended question. Acting as a qualitative measure, an open-ended question asked participants to identify the extent to which they felt their performance in the session accurately reflected their ability to speak French.

Manipulation check. One 7-point item asked participants to identify the extent to which the Francophone interviewer came across as an authority figure (1 = *not at all* to 7 = *completely*). This question was meant to determine how well participants perceived the differential interlocutor status across the professor

and peer conditions. Participants were also asked to explain what they thought the present study was about.

Participants were provided with the experimenter's email in the event of further questions or concerns, and were thanked for their participation. Debriefing took place via email, where participants were informed of all minor deception used in the study as well as the study's real purpose.

Results

Manipulation Check

An independent samples t-test was conducted on the manipulation check question to determine whether the experimental manipulation of interlocutor status had the intended effect across conditions. As planned, participants viewed the Francophone professor as having more authority ($M = 4.04$, $SD = 1.73$) than the Francophone peer ($M = 2.54$, $SD = 1.82$), $t(46) = 2.93$, $p = .005$, $d = .84$.

Descriptive Statistics

Descriptive statistics for all primary measures across conditions can be found in Table 1. As can be seen from this table, there was no concern for floor or ceiling effect for any of the measures. All of the measures were also checked for normality, skewness, kurtosis as well as for outliers. All statistics indicated that there were no problems with the data.

Testing for Condition Effect

Independent samples t-tests were conducted to test the hypotheses that participants in the professor condition would have higher scores on the SLA Scale,

Table 1
Descriptive Statistics for all Primary Measures Across Conditions

Variables	Professor ($n = 24$)		Peer ($n = 24$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Global French Proficiency Scale	3.30	0.80	3.49	0.70
2. Can-Do Scale	4.70	0.87	4.81	0.82
3. SLA Scale	4.06	1.09	4.35	1.11
4. Spoken French Proficiency Scale	3.13	1.16	3.44	0.98

Note. $N = 48$. SLA = second language anxiety.

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Table 2

Zero-Order Bivariate Correlations Between Primary Measures

Measures	1	2	3	4
1. Global French Proficiency Scale	-	.66**	-.45**	.42**
2. Can-Do Scale		-	-.44*	.37**
3. SLA Scale			-	-.08
4. Spoken French Proficiency Scale				-

Note. ** $p < .001$, SLA = Second Language Anxiety.

and lower scores in the Global French Proficiency Scale or the Can-Do Scale than participants in the peer condition. No condition effects were found for the SLA Scale, $t(46) = 0.94$, $p = .354$, $d = .27$, for the Spoken French Proficiency Scale, $t(46) = 1.00$, $p = .324$, $d = .29$ for the Global French Proficiency Scale, $t(46) = 1.87$, $p = .390$, $d = .25$, and for the Can-Do Scale, $t(46) = .46$, $p = .646$, $d = .13$.

Correlational Analyses

Correlations between the primary measures are summarized in Table 2. Scores on the Spoken French Proficiency Scale were positively correlated with both measures of perceived FP (Global French Proficiency Scale and Can-Do Scale), where the greater the perceived FP of participants, the better their spoken FP. Confirming the hypothesis that SLA would be negatively correlated with perceived FP, it can be seen that both the Global French Proficiency Scale and the Can-Do Scale were negatively correlated with the

SLA Scale. The higher the perceived FP of participants, the lower their SLA. However, the hypothesis that SLA would be negatively correlated with spoken FP was not supported.

The Interaction of Status with Perceived FP in Predicting Spoken FP and SLA

Given that no main effects of condition were found, the possibility that interlocutor status may have been interacting with perceived FP to predict spoken FP and SLA differentially was explored using hierarchical regression analyses. Status and perceived FP (centered) were entered as predictors in Step 1, their interaction term (status X perceived FP) was entered as a predictor in Step 2, and spoken FP (or SLA) was entered as the outcome variable. For spoken FP, the interaction effect of status and perceived FP was not statistically significant. For SLA, the interaction of status and perceived FP was marginally significant, $F(1, 44) = 2.88$, $p = .097$ (see Table 3).

Table 3

Hierarchical Regression Analyses Testing Condition Effects

Predictors	SLA				Spoken FP			
	R^2	b	SE b	β	R^2	b	SE b	β
Step 1	.22				.15			
Status		.36	.29	.17		.26	.29	.12
Percieved FP		-.59***	.17	-.45***		.46**	.18	.36**
Step 2	.27				.15			
Status		.36	.28	.17		.26	.30	.12
Percieved FP		.26	.53	.20		.47	.55	.37
Status X Percieved FP		-.58*	.34	-.68*		-.01	.36	-.01

Note. * $p < .10$, ** $p < .05$, *** $p < .01$; SLA: For Step 2, $\Delta R^2 = .05$ ($p < .05$); Spoken FP: For Step 2, $\Delta R^2 = .00$, ns; SLA = Second Language Anxiety, FP = French Proficiency.

This interaction effect is plotted in Figure 2, where high perceived FP was set at 1 standard deviation above the mean, and low perceived FP was set at 1 standard deviation below the mean. The slopes were tested using simple slopes analyses (Aiken & West, 1991). For participants who reported having high perceived FP, the experimental manipulation did not influence their SLA ($b = -.12$, $t = -0.30$, $p = .766$). Contrary to hypotheses, for participants who reported having low perceived FP, those in the peer condition experienced more SLA than those in the professor condition ($b = .85$, $t = 2.11$, $p = .040$).

Discussion

The goal of the present study was to examine the impact of high and low interlocutor status on SLA, spoken FP, and perceived FP. Spoken interpersonal communication is at the core of SLA and second language learning, where research shows that second language speaking tasks are associated with higher levels of SLA than other second language tasks (Hewitt & Stephenson, 2012; Kim, 1998; MacIntyre, 1992; Philips, 1992). Given the correlational nature of previous research, it is important to better understand the contextual factors that play a role in the level of SLA and language proficiency in second language speaking tasks. Focusing on one contextual factor, the present study attempted to further the preliminary

research on interlocutor status by asking participants to perform a number of spoken French tasks for either a Francophone professor of high status or a Francophone peer of low status.

It was predicted that SLA would be negatively correlated with both spoken FP and perceived FP. Partially in line with the correlational hypotheses, SLA was negatively correlated with perceived FP. However, there was no significant association between SLA and spoken FP. This pattern of findings suggests that higher SLA was related to the perception of diminished ability, but unrelated to actual performance.

It was also predicted that high interlocutor status would result in higher SLA, lower spoken FP, and lower perceived FP than low interlocutor status. Contrary to this hypothesis, results revealed no effect of status manipulation on SLA, spoken FP, or perceived FP. Clément et al.'s (1977) model of self-confidence in second language use emphasizes the importance of perceived proficiency when interacting with members of the second language community. Given this model, an exploratory analysis examining the moderating effect of perceived FP was justified in the present study. Indeed, the exploratory analysis showed that perceived FP marginally moderated the relationship between status and SLA. When participants believed that they were less competent in French, they were more anxious when speaking to a Francophone peer of equal status than when speaking to a Francophone professor of high status. The direction of this interaction was opposite to the original hypotheses. Conversely, when participants believed they were highly competent in French, status had no effect across conditions.

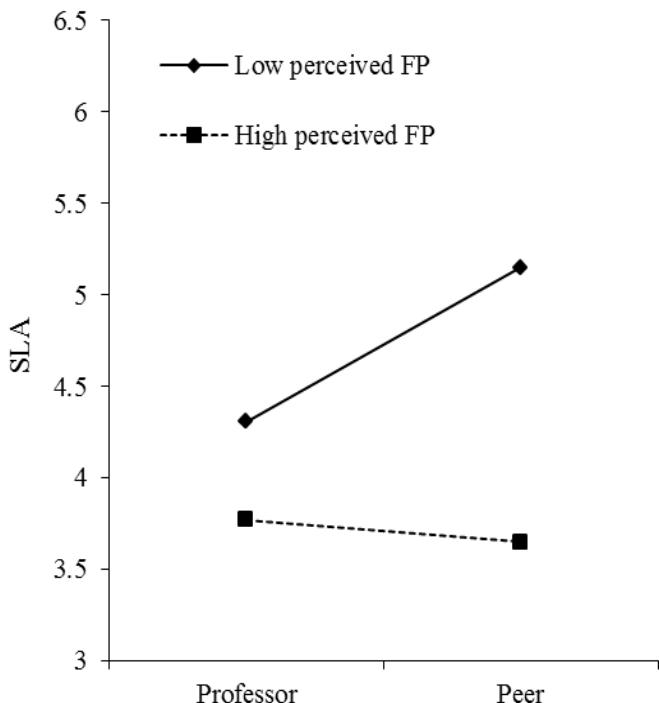


Figure 2. Simple slopes analysis for SLA across condition as moderated by perceived FP.

SLA with Low Perceived FP

The fact that participants with low perceived FP found a Francophone peer of equal status more anxiety-inducing than a Francophone professor is an element that deserves attention. Although results indicated that participants perceived the Francophone professor as having more authority than the Francophone peer, authority represented only one aspect of interlocutor status in the present study. Lower status was also established by stressing the friendliness and support of the Francophone peer in contrast to the Francophone professor. This was done because Clément et al. (1977) and Palacios (1998)

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found that students felt more comfortable speaking their second language outside the classroom with friends or at home than they did in the classroom. The experimenters explained that the Francophone peer was a close friend and was interested in learning English. The Francophone peer also spoke in a more relaxed and friendly tone of voice than the Francophone professor. However, because participants had never met the Francophone peer, it may be that these elements were too impersonal to resemble a true friendship. This could explain why no experimental effects were found across conditions.

It may be that other elements of interlocutor status were at play in the present study, including the possibility of negative evaluation from the interlocutor. The fact that participants with low perceived FP found a Francophone peer of equal status more anxiety-inducing than a Francophone professor suggests that status had some effect on SLA, even if it was opposite to the expected direction. In addition to the fact that participants had never met the Francophone peer before, the experimental task was one-sided, video recorded, and fixed on a certain topic. Given these elements, it is likely that they did not interpret the experimental task as having a conversation with a friend outside of class. Rather than creating the intended distinction between the peer condition (low status, relaxed and friendly conversational French in a natural setting) and the professor condition (high status, formal and evaluated conversational French in a classroom), the interaction in both conditions resembled a classroom-type evaluation.

Horwitz et al. (1986) have suggested that SLA results from a fear of negative evaluation. Palacios (1998) stated that students reported feeling more comfortable speaking a second language outside of class, because they were removed from the possibility of evaluation. While interlocutor status and evaluative consequences represent two separate concepts, they are closely related to each other in that the level of perceived negative evaluation by the student may depend on his or her relationship to the interlocutor. For example, just because a peer has less authority, does not mean that he or she will evaluate the student less negatively. This may be particularly true if the peer has no friendship connection with the student, and if the interaction takes place in a classroom-type setting, which was the case in the present study.

It may be that participants considered being evaluated by the Francophone peer as worse than being evaluated by the Francophone professor. One participant, exposed to the Francophone peer, explained that her fluency increases when speaking with a native-speaker friend who establishes a safe learning environment by providing correction and support. However, this participant did not report experiencing the same level of support from the Francophone peer as she would have experienced from a native-speaker friend, and instead she expressed having the “constant thought of ‘you said something wrong’ in the back of [her] head.”

Classroom-type oral tasks, such as the one in the current study, are often performed for a professor rather than a peer. A professor hears second language speakers on a regular basis and is familiar with the process of teaching a second language. What happens within the classroom has no serious repercussions on one’s social life outside of the classroom. Conversely, when speaking to a peer, there is the possibility of communication and friendship outside the classroom that does not exist with a professor. Therefore, the evaluative consequences of making performance errors in front of a peer in a classroom or formal setting are more varied than when making those errors in front of a professor. This is due to the underlying need to impress the peer, avoid judgment, or present oneself as cool, friendly, or interesting. This interpretation could explain why participants with low perceived FP had a higher level of SLA when speaking to the Francophone peer compared to the Francophone professor.

In future, all elements of interlocutor status should be measured to assess the impact of status manipulation. It would also be beneficial to measure perceived negative evaluation in order to strengthen the theoretical link between interlocutor status and evaluative consequences. To understand the role of peer evaluation on SLA and language proficiency, future avenues of research should explore the impact of communication with a peer inside and outside of the classroom, or with a stranger and a friend.

SLA with High Perceived FP

Compared to participants with low perceived FP, Clément et al.’s (1977) model of self-confidence can explain why participants with high perceived FP had similar levels of SLA across both conditions. He proposed that individuals with low language anxiety

and high perceived proficiency are confident in speaking their second language. In the present study, participants with high perceived FP fit this description and were likely confident of their ability to present themselves in an intelligent manner for both the Francophone peer and the Francophone professor.

Status and Spoken FP

Contrary to original hypotheses, the present study revealed no effect of status on spoken FP and no correlation between SLA and spoken FP. These findings are interesting in light of the numerous studies that have established a significant negative association between SLA and second language proficiency tasks (Horwitz, 1986, 2001; MacIntyre, 1992; Phillips, 1992). Steinberg and Horwitz (1986) even managed to experimentally show that inducing anxiety in participants by treating them in an unfriendly manner resulted in less elaborate oral explanations of ambiguous images.

The lack of association between SLA and spoken FP can be interpreted in two ways. First, feeling anxious does not actually influence individuals' performance, even when they believe they are performing badly or are incompetent in the language. In this sense, it is simply the perception of low proficiency that is associated with feeling anxious, where in reality the individual is performing to his or her skill level. Second, the lack of significant findings could be due to measurement error. The Spoken French Proficiency Scale used in the present study was a modified version of the Common European Framework of Reference (CEFR; Concil of Europe, 2001). The CEFR is meant to be a descriptive scale that measures language proficiency, and has yet to establish strong reliability and validity. The lack of standardization for the Spoken French Proficiency Scale is a limitation when interpreting the effect of status on spoken FP. However, its use highlights the need to develop standardized scales measuring second language proficiency that can be easily scored by native-speaker judges. Available scales in the literature are either too broad (i.e., only measuring fluency) or too cumbersome (i.e., require extensive training to administer). The Spoken French Proficiency Scale was a preliminary attempt at using a modified scale that can be employed by any native or proficient speaker of the language in question. It should not be discarded, but developed by using it alongside other measures in future studies in order to ascertain its reliability and validity.

Certain limitations and recommendations should be highlighted with regard to the unconfirmed hypotheses. First, a lack of effect for interlocutor status across condition could be due to a small sample size. In order to increase power, future studies would benefit from testing a larger participant pool. Future studies should also aim to get an equal distribution between men and women in order to extend generalizability.

Second, it may be beneficial to control for demographic and personal information, such as the similarity between the participants' first language and the target language (French), exposure to second language speaking, or presence of an anxiety disorder. Although any differences across condition should have been eliminated through random assignment, these variables may influence self-confidence and motivation in speaking a second language. Furthermore, this information would shed light on the theoretical underpinnings of interlocutor status.

Third, having participants reflect on second language experience and perceived FP before completing the experimental task could have had a priming effect on their level of self-confidence in speaking French. For example, completing the Can-Do Scale prior to watching the video reminds participants of their beliefs regarding proficiency. Future studies could collect this information during a pre-test at a different time as opposed to doing it directly before exposure to the interlocutor.

Fourth, it could be that no condition effects were found because both the professor and the peer were from France. Canadian students likely have more exposure to French Canadian accents than to accents from France. What effect would status have if the interlocutor was Quebecer or Franco-Ontarian? Perhaps a true representation of equal status can only be established between the interlocutor and the participant if the peer is also a second language speaker. These are all relevant questions that can be answered through further research in the area of interlocutor status.

Finally, the lack of condition effect could be due to the use of video footage to manipulate interlocutor status in lieu of live interviews. On one hand, video footage is advantageous because it allows for greater control of extraneous factors by using the same confederate. On the other hand, it removes the participant from a fluid conversation and from

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immediate evaluation. Future studies should explore the effect of interlocutor status on SLA and spoken FP using live interviews.

Even with these limitations, the current study was an important step for future research on interlocutor status, spoken FP, perceived FP, and SLA for several reasons. It was one of the first studies, other than the study by Steinberg and Horwitz (1986), to experimentally explore interlocutor characteristics in a second language context. It also presented a feasible way of measuring spoken FP using native-speaker judges. This scale should be replicated and developed in future research. Most importantly, it confirmed that beliefs about language proficiency are associated with SLA, and that when perceived FP is low, the evaluative consequences of interlocutor status influence the level of SLA. The link between interlocutor status and negative evaluation as well as their combined effect on SLA and language proficiency should be explored in future studies.

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Explicit but Not Implicit Mood is Affected by Progressive Social Exclusion

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Past research has shown that clear-cut exclusion (e.g., being completely left out) worsens mood and threatens basic needs, as assessed by explicit self-report measures. Here, we investigated the impact of subtle exclusion on implicit mood and self-esteem, as well as the effect of introspection on the same implicit processes. In five rounds of a virtual three-person ball-tossing game, all participants were initially included (round 1), but encountered increasing levels of either subtle exclusion or subtle overinclusion (rounds 2-5). Following each round, participants completed implicit measures; half of the participants were randomly assigned to also complete explicit measures before the implicit measures, which served to increase introspection. Replicating previous findings, progressive exclusion negatively impacted explicit moods and needs. However, neither exclusion nor introspection affected implicit mood and self-esteem. The construct validity of implicit measures is discussed.

Keywords: progressive social exclusion, ambiguous social dynamics, Cyberball, introspection, implicit mood

Des études ont démontré que l'exclusion catégorique (c.-à-d., être complètement mis à part) détériore l'humeur et menace les besoins de base, tel que mesuré par des instruments auto-rapportés. Cet article explore l'effet de l'exclusion subtile sur l'humeur et l'estime de soi implicites, ainsi que l'effet de compléter des mesures auto-rapportées sur ces processus implicites. Lors d'un jeu virtuel à trois joueurs comportant cinq parties, tous les participants étaient initialement inclus (partie 1) puis exposés à des niveaux croissants d'exclusion ou d'inclusion subtiles (partie 2-5). Après chaque partie, les participants ont complété des mesures implicites; la moitié des sujets ont été aléatoirement assignés à répondre à des mesures explicites afin d'accroître leur sentiment d'introspection. Les résultats ont démontré qu'une exclusion progressive affecte négativement l'humeur et les besoins explicites. L'exclusion et l'introspection n'ont pas eu d'impact sur l'humeur implicite ou l'estime de soi. La validité de construit des mesures implicites sera discutée.

Mots-clés : exclusion sociale progressive, dynamique sociale ambiguë, Cyberball, introspection, humeur implicite

To be human is also to be interdependent. Human beings are social creatures who rely on each other to survive and thrive, making acceptance and belongingness absolutely vital to life. Not surprisingly, being rejected by others has been shown

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to have a number of devastating mental and physical consequences (MacDonald & Leary, 2005). However, to date, the vast majority of research on social exclusion has studied *explicit* responses to *clear-cut* exclusion — that is, what people consciously report feeling, as assessed via self-report methods, when they are completely and unambiguously excluded by others (for a review, see Williams, 2007). But in everyday scenarios, exclusion may be more ambiguous and subtle, such as when a person is only slightly left out of an interaction. One challenge for studying responses to subtle and ambiguous forms of exclusion is that using self-report methods, which directly ask individuals to report on their thoughts and feelings, might draw attention to dynamics that might have gone unnoticed otherwise.

Thus, to investigate how an individual responds to subtle and ambiguous forms of social exclusion, the present study used implicit measures to assess mood and self-esteem. In contrast to explicit measures that directly ask participants to introspect, deliberate on, and report their feelings, implicit measures indirectly tap into how people feel and think. Our goals were twofold. First, we aimed to investigate whether subtle forms of social exclusion negatively impact implicit mood and self-esteem. That is, if people were not directly prompted to think about the dynamics, perhaps they would not be aware of these more subtle instances of exclusion, and would not experience a decrease in mood and self-esteem. Alternatively, because research has shown that people are highly sensitive to any signs of exclusion, perhaps they would experience a decrease in implicit mood and self-esteem no matter how subtle the dynamics. Second, we aimed to investigate whether prompting individuals to introspect, by having them complete self-report measures, draws attention to social dynamics, which in turn exacerbates the negative outcomes of exclusion on these same implicit measures. That is, does highlighting subtly negative dynamics (via self-report completion) lead people to feel even worse?

In the sections below, we first present a brief review of how past work has studied social exclusion. We then highlight questions, which past research has not addressed, that are the focus of the present work, and, afterwards, discuss our primary aims, hypotheses, and support for our expectations.

The Effects of Clear-Cut Exclusion

Traditionally, research on exclusion has focused on situations in which a person is clearly and unambiguously excluded. For example, in Cyberball (Williams, Cheung, & Choi, 2000), which has become a classic paradigm for experimentally creating social exclusion, participants are told that they are to play a virtual turn-taking ball-tossing game with two other people. In fact, unbeknownst to the participants, the other two “players” do not actually exist, and their behaviors are programmed. In the standard exclusion condition, the other two players are programmed to throw the ball to the participant a few times at the very start of the game, but thereafter completely exclude the participant from the ball tossing and only throw the ball to each other.

Previous research using Cyberball and other methods (Baumeister, Twenge, & Nuss, 2002) has found that being the target of clear-cut, unambiguous exclusion increases negative mood and lowers levels of basic fundamental needs such as feelings of belongingness, control, self-esteem, and meaningful existence (Williams, 2009). The experience also leaves one feeling pained (Eisenberger, Lieberman, & Williams, 2003), cold (Zhong & Leonardelli, 2008) and numb (DeWall & Baumeister, 2006), and it increases the likelihood of engaging in antisocial behaviors (Twenge & Campbell, 2003). Social exclusion has also been shown to increase cells’ secretion of proinflammatory cytokines; in excess, these cytokines increase the body’s susceptibility to inflammatory diseases (Slavich, Way, Eisenberger, & Taylor, 2010) and have been implicated in the development of depressive symptoms (Anisman & Merali, 2002). Lastly, unambiguous exclusion also activates areas of the brain (e.g., dorsal anterior cingulate cortex) similar to those activated during physical pain (Eisenberger et al., 2003).

From Explicit Measures and Clear-Cut Exclusion to Implicit Measures and Subtle Exclusion

Despite the rich body of research on the detrimental consequences of exclusion, past work, with few exceptions, has focused on instances of clear-cut exclusion (e.g., as created experimentally using Cyberball) and relied primarily on self-report measures to assess the consequences of exclusion on mood and self-esteem (Williams, 2009). But in day-to-day situations, exclusion may be much more subtle than in those situations involving clear-cut exclusion, and individuals are not typically asked to reflect on the experience and their feelings. Surprisingly, there has been much less attention devoted to understanding how people respond to and make sense of these subtler social dynamics, which, arguably, are likely to occur with regularity. For example, someone may be excluded by one person, but included by another one (Chernyak & Zayas, 2010), or left out in only one part of an activity, but included in another part (Jones, Carter-Sowell, Kelly, & Williams, 2009).

In the present research, we were interested in one form of subtle social dynamic: situations in which a person is included, but not to the same extent as the other people in the group, and excluded to a greater extent over time. To date, only two studies have examined responses to subtle forms of social exclusion.

EXCLUSION LOWERS EXPLICIT, NOT IMPLICIT MOOD

This line of work used a modified version of Cyberball called the progressive Cyberball paradigm (Anderson & Zayas, 2012; Löckenhoff, Cook, Anderson, & Zayas, 2012). In this version, participants play five consecutive rounds of Cyberball. In the first round, participants are included by the two players and receive the ball one-third of the time. But, with each subsequent round, they receive fewer and fewer ball tosses until the fifth and final round, when they are nearly completely excluded.

Past research using this paradigm (Anderson & Zayas, 2012; Löckenhoff et al., 2012) found that even small shifts from inclusion to exclusion (i.e., receiving four fewer ball tosses than a fair one-third of the tosses) had deleterious effects on mood and on psychological needs. However, critically, these studies used explicit measures in which participants were directly asked, following each round, to think about how they felt (e.g., belonging versus not belonging). But, asking individuals to report on their thoughts and feelings in response to subtle dynamics might draw their attention to various interpersonal undercurrents that they may otherwise have overlooked. Would participants have noticed receiving the ball four fewer times if they had not been prompted to think about whether they belonged (versus did not belong)?

To investigate how people respond to subtle instances of exclusion, it is necessary to use tools other than explicit measures. Implicit measures are one such tool, because they differ from self-reports in important ways. Self-report measures directly ask individuals to report on their feelings and thoughts in response to the social dynamics (e.g., “How much do you feel like you belong?”), and thus tap into what is referred to as explicit mood and self-esteem, which are defined respectively as consciously accessible mood and self-esteem that participants themselves report (Greenwald & Banaji, 1995). In contrast, implicit measures assess individuals’ states indirectly, with the aim of bypassing conscious deliberation and self-presentational concerns. Thus, implicit measures are assumed to assess evaluations that become activated automatically, spontaneously, without effort, and, at times, without awareness (Bosson, Swann, & Pennebaker, 2000; Quirin, Kazén, & Kuhl, 2009).

Although self-reports of people’s explicit, consciously-held beliefs, attitudes, and experiences are useful, their accuracy depends on people’s ability to access their feelings and their willingness to report on them (Ross & Nisbett, 1991). For this reason, while

explicit and implicit measures at times show convergence, at other times they show dissociations (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). In particular, it has been argued that when topics are personally and socially sensitive, as might be the case for instances in which one experiences exclusion, people may misrepresent their feelings either to others for the sake of self-presentation or situational demands, or to themselves for the sake of defending against threat (Greenwald et al., 2009). The concern about situational demand characteristics is particularly relevant to the present work. As illustrated by Orne’s (1962) “good subject effect,” participants behave and respond in accordance with what they believe to be the true purpose of the experiment. Therefore, it is possible that in typical social exclusion studies, in which the social dynamic is obvious, participants may report more negative mood and lower self-esteem to conform to what they think the experimenter expects.

How Do Varying Levels of Exclusion Affect Implicit Mood and Self-Esteem?

In the present research, we were particularly interested in investigating whether experiencing varying levels of exclusion (from subtle to more extreme) would affect implicit self-esteem and implicit mood. In some instances, research has documented that people show an increase in implicit self-esteem in response to threats (Rudman, Dohn, & Fairchild, 2007), but findings from the exclusion literature clearly predict that individuals will show a decrease in implicit mood and self-esteem. Specifically, according to the sociometer hypothesis (Leary, Tambor, Terdal, & Downs, 1995), self-esteem is an automatic psychological meter for assessing whether one is included or excluded in a group. Although not using implicit measures, Leary and colleagues (1995) found that participants’ ratings of their degree of inclusion in a social interaction were positively correlated with their self-esteem, and that their self-esteem decreased after experiencing social exclusion. In further support of our prediction, a different study, which focused specifically on implicit self-esteem, found that increasing participants’ feelings of acceptance resulted in improvements in their implicit self-esteem (Baccus, Baldwin, & Packer, 2004). Yet another study demonstrated that, after recalling a negative autobiographical memory, participants showed a significant decrease in implicit mood as assessed by the Implicit Positive and Negative Affect Test (IPANAT; Selcuk, Zayas, Günaydin, Hazan, & Kross, 2012).

How Does Introspection Affect Implicit Mood and Self-Esteem in Response to Varying Levels of Exclusion?

The present research also addressed a second related question: Does asking individuals to introspect on their feelings, for example by having them self-report on their mood, in fact worsen their experience of exclusion as assessed by implicit mood and self-esteem? Although everyone may experience negative mood in situations in which the social exclusion is obvious, introspection may, in fact, worsen mood when the exclusion is subtle and ambiguous, because it may draw attention to only mildly negative affective states that may have been undetected otherwise.

The intuition that introspection may lead to worse outcomes in response to subtle forms of exclusion is supported by distinct research. In one study focusing specifically on the effects of introspection, participants were asked to pick between two types of posters that they would later take home (Wilson et al., 1993). Half of them were asked to think about the reasons for their selection, and the other half was not. When queried three weeks later, the group that had introspected was much less satisfied with their selection, compared to the control group. Similarly, participants who were told to introspect about the reasons for being in a current relationship were more likely to show changes in how they felt about their romantic partner, compared to those who did not introspect (Wilson & Kraft, 1993). Research evaluating the efficacy of grief counseling also provides compelling evidence for the idea that introspection may, at times, be disadvantageous. Jordan and Neimeyer (2003) suggest in a meta-analysis of existing research that, in some cases, people may fare better without therapeutic intervention; in one study, men who participated in a group intervention for parents bereaved by the violent death of their children experienced worsened post-traumatic stress symptoms, compared to parents who did not receive the intervention (Murphy et al., 1998, as cited in Jordan & Neimeyer, 2003). Collectively, the literature shows that introspection can destabilize people's attitudes, even about important and personally significant topics such as relationships with their significant others, or responses to death of a loved one.

How Does Overinclusion Affect Implicit Mood and Self-Esteem?

Finally, although not a central aim of the present work, we investigated a novel social dynamic of overinclusion, which was first identified by Anderson and Zayas (2012). In what they referred to as the overinclusion condition, participants were initially included by receiving the ball an equal number of times from the other players. Then, however, with each subsequent round, participants received more and more of the ball tosses, culminating in the final round in which they received nearly all the ball tosses. Interestingly, Anderson and Zayas (2012) found that overinclusion led to an overall increase in participants' mood and psychological need scores, but only in individuals characterized by high rejection sensitivity, who are chronically worried about rejection and belonging. In contrast, there was no appreciable effect of overinclusion for those with low rejection sensitivity.

Aims and Hypotheses

Whereas existing work on social exclusion has focused on how people respond to clear-cut exclusion as assessed by explicit measures of mood and psychological needs, the aim of the present work was to examine (i) whether exclusion would lead to more negative implicit mood and self-esteem, and (ii) whether answering self-report measures (versus not answering) worsens the experience of social exclusion. The present research also explored implicit responses to a novel social dynamic — overinclusion, in which one is included beyond the expected amount (i.e., receiving disproportionately more attention than the other members of one's social group; Anderson & Zayas, 2012).

To address these aims, we manipulated subtle forms of exclusion (and overinclusion) by using the *progressive Cyberball paradigm* (Anderson & Zayas, 2012; Löckenhoff et al., 2012). The use of this paradigm was necessary given the goal of investigating the effects of introspection on implicit moods and self-esteem; in particular, we reasoned that when exclusion is clear-cut, everyone is expected to respond with lowered moods and self-esteem. However, it is when exclusion is subtle and ambiguous — and open to interpretation — that being prompted to introspect may have an effect on people's implicit responses. Accordingly, although all participants experienced inclusion in the initial round,

they were randomly assigned to experience increasing levels of exclusion or overinclusion in successive rounds of the game. In addition, within both the exclusion and overinclusion conditions, participants were randomly assigned to either introspect — that is, to complete explicit self-report measures of their mood and needs following each round of the game — or not to, prior to completing implicit mood and self-esteem measures¹.

Based on the literature, we made several *a priori* predictions for responses to progressive exclusion. First, participants' levels of mood and psychological needs, both explicit and implicit, were expected to decline linearly with each round of Cyberball, as exclusion became more and more blatant. Second, extrapolating from the literature on the drawbacks of introspective thought, we predicted a greater linear decline in implicit mood and needs for participants who introspected (i.e., completed self-report measures) following each round, compared to those who did not.

Given that less is known about how individuals respond to dynamics involving overinclusion, and that the lone existing study on this topic found no overall effect of overinclusion, we did not make any *a priori* predictions and treated our analyses with regard to overinclusion as exploratory.

Method

Participants

One hundred and twenty-seven students at Cornell University participated in this experiment in exchange for either extra credit in a course or 5 USD prorated for every half-hour of participation. The data from one participant were discarded due to failure to properly follow directions. Data for the remaining 126 participants ($M_{age} = 20.8$, $SD = 2.0$) are reported here; 71.7% are female; 57.9% White, 26.9% Asian, 11.9% Black/African American, and 3.1% of other ethnicity.

¹Past work has used explicit measures to assess mood and levels of psychological needs, one of which is self-esteem (the others are belonging, control, meaningful existence). The explicit measures used in our study were similar in this regard. In contrast, our implicit measures only assessed mood and one of the four needs, self-esteem. Thus, in this paper, *explicit measures* refers to measures assessing mood and psychological needs, whereas *implicit measures* refers to the measures assessing mood and self-esteem.

Design

This experiment employed a mixed design with two between-subject factors and one within-subject factor. The two overarching between-subject factors were self-report (present versus absent) crossed with inclusion status (progressive exclusion versus progressive overinclusion). The sample sizes within each cell ranged from 31 to 33 participants. In addition, the within-subject factor was departure from complete fair distribution of ball tosses. Specifically, as will be explained below, all participants played either five or six rounds and were fairly included in the first round. However, as will be also discussed in the procedures hereafter, participants experienced increasing levels of either exclusion or overinclusion in subsequent rounds depending on their randomly assigned condition.

Procedure

Upon their arrival in the laboratory, participants were told that their task was to take part in an online ball-tossing game (i.e., Cyberball; Williams et al., 2000) as part of a study on social interactions. The game was created using Inquisit 3.0.5.0 (Inquisit, 2011). Participants were informed that they would be playing with two other study participants seated elsewhere in the building. Unbeknownst to them was that the two other players did not actually exist, and their behaviors were, in fact, preprogrammed. Participants were then seated at a computer and asked to sign an informed consent form while the experimenter left the room for sixty seconds to check on the readiness of the other supposed experimenters and participants. Once the experimenter returned to the room, the game began. The upper corners of the game screen showed two silhouetted avatars of the cyber players labeled "Player A" and "Player C" ostensibly in order to protect their confidentiality; the bottom center of the screen showed an avatar labeled "You," which represented the participant. Participants used the computer mouse to click on the avatar of the player they wanted to throw the ball to. Participants were told that the computer task was one continuous game, which would be paused every few minutes to allow everyone to fill out questionnaires about the game experience. In actuality, each "pause" marked the end of a distinct round of Cyberball, each round comprising 54 ball tosses and lasting about 2.5 minutes.

Participants were randomly assigned to either an *explicit self-report* condition or a *no self-report* condition. In the explicit self-report condition, participants completed questionnaires after each round of the game. These questionnaires consisted of explicit measures of mood and belonging needs answered on the computer, as well as implicit measures of mood and self-esteem answered on paper. In the no self-report condition, participants completed only the implicit measures.

Within each of those conditions, participants were then randomly assigned to an inclusion status group: either *exclusion* or *overinclusion*. As in Anderson and Zayas' (2012) paradigm, the first round of the game for both groups consisted of fair inclusion, during which all three players received the ball one-third of the time, or 18 out of 54 tosses. In the exclusion group, participants received four (7.4%) fewer tosses per round in each subsequent round (i.e., two fewer tosses from each player), such that participants received only two (3.7%) of the total tosses in the fifth round. In the overinclusion group, participants received two (3.7%) more tosses per round (i.e., one more toss from each of the players), such that participants received 26 out of 54 tosses (48%) in the fifth round. Anderson and Zayas' (2012) rationale for the different ball toss increments between groups was to ensure that the study encompassed a full range of exclusion and overinclusion; receiving 3.7% of all tosses is near-total exclusion, whereas receiving 48% of all tosses is near-total overinclusion. At the end of the experiment, participants completed a manipulation check, a suspicion probe, and a demographics form. They were then debriefed on the purpose of the study and thanked for their time.

Manipulation Checks and Suspicion Probe

By the end of the game, participants were either being completely excluded or completely overincluded, depending on their condition. To assess their awareness of the imbalanced social dynamics, participants were asked to estimate the percentage of ball tosses they received from Player C and from Player A, and these estimates were averaged. We then investigated whether participants in the exclusion condition reported that the other two players had thrown the ball more often to one another, which would lead to lower estimations of having received the ball, and whether players in the overinclusion condition had thrown the ball more often to the

participant, which would lead to higher estimations of having received the ball.

Participants were also asked the following open-ended question: "Do you think you have an idea of what this experiment is about?" They were then probed for previous knowledge regarding Cyberball and asked for their guesses on how Cyberball might have been used in the present experiment. No participant was able to guess the hypothesis of the experiment, but 17 participants (14 exclusion and 3 overinclusion; from these 17, 8 were in the explicit self-report condition and 9 in the no self-report condition) reported suspicion that the implicit mood measures were being used to gauge their responses to being excluded or included in the game. The analyses were rerun excluding the participants who mentioned anything about one or more of the implicit mood measures being used to assess their mood following Cyberball, and the results remained relatively unchanged from those based on the entire sample.

Controlling for Time-Related Effects

Half of the participants played five rounds of the Cyberball game, as in Anderson and Zayas (2012). The other half, however, played six rounds, starting off with two rounds of fair play, or inclusion, rather than one, before the progressive exclusion or overinclusion rounds began. The reason for this design was to try to tease apart the confounded effects of time and exclusion. Participants' mood levels were expected to decline from progressive exclusion, but they may also have declined simply as a function of extended exposure to a tedious computer game. Thus, this staggered design, wherein some participants experienced the exclusion (or overinclusion) manipulation one round later than others, allowed the comparison of mood levels across manipulations, controlling for time. No effect of time was found. Therefore, all results were collapsed across stagger conditions.

Measures

Explicit measure of mood and psychological needs. After each round of Cyberball, participants in the explicit self-report condition completed the explicit mood and psychological needs scale, comprised of 12 randomly presented bipolar questions on a 7-point scale, also on the computer, following procedures used by Anderson and Zayas (2012).

The questions assessed level of needs for belonging (“disconnected/connected,” “I belong/I don’t belong,” “like an outsider/like an insider”), control (“powerless/powerful,” “I have control/I lack control,” “uninfluential/influential”), mood (“sad/happy,” “friendly/unfriendly,” “angry/pleasant”), and awkwardness (“uneasy/easy,” “comfortable/uncomfortable,” “awkward/not awkward”). In any given round of the game, Cronbach’s alpha was greater than .72 for each subscale (i.e., belonging, control, mood, awkwardness) as well as for all 12 items. For the purpose of simplifying the results, a single aggregate mood-needs score, hereafter referred to as “explicit mood and needs,” was used to represent the 12 items for each round (analyses examining the four individual scales produced similar results).

As in Anderson and Zayas (2012), the mood, belonging, and control items were based on Zadro, Williams, and Richardson’s (2004) ostracism measure. In addition to belonging and control, self-esteem and meaningful existence are often implicated in social exclusion as well, but Anderson and Zayas (2012) excluded them for the sake of brevity; furthermore, a meta-analysis of rejection by Gerber and Wheeler (2009) suggested that out of these four needs, belonging and control were the most impacted by exclusion. Additionally, we used the awkwardness scale because it is appropriate for assessing negative feelings that might arise due to being overincluded; we included it in the exclusion condition for consistency across conditions.

Implicit measures of mood and self-esteem. Participants completed implicit measures following each round of Cyberball. Although there are a number of different types of implicit measures (Bosson et al., 2000), we used the following three, which have been used in past work to assess state changes in implicit mood and self-esteem: the Name Letter Task (Fukukura, Zayas, & Ferguson, 2013; Kitayama & Karasawa, 1997; Koole, Dijksterhuis, & van Knippenberg, 2001), the IPANAT (Quirin et al., 2009; Selcuk et al., 2012), and the Signature Size Task (Zweigenhaft, 1977; Fukukura et al., 2013). Because we were interested in obtaining Signature Size Task as one of our implicit measures, participants completed all implicit measures using paper-and-pencil (versus computer). Those in the self-report condition completed the implicit measures following completion of the computer questionnaire, and those in the no self-report condition did so immediately following the Cyberball round.

Name Letter Task. Participants were given a list of the 26 letters of the Roman alphabet, in a different randomized order each time, and they were asked to rate their liking of each of them on a 7-point scale. To obtain a Name Letter Task score for each round, the mean of each participant’s ratings of his or her first-name initial and surname initial was calculated, along with the mean ratings of the other 24 letters. The other-letters mean was then subtracted from the own-letters mean. Higher numbers reflect greater implicit positivity towards oneself (versus others).

IPANAT. Participants were shown words from a supposed artificial language (i.e., SAFME, VIKES, TUNBA, TALEP, BELNI, and SUKOV) and asked to indicate how well they thought it fit with six different adjectives: *happy*, *helpless*, *energetic*, *tense*, *cheerful*, and *inhibited*. Because of its length, the whole measure could not be shown after each round. Instead, participants rated one artificial word after each round. The specific artificial word presented in any given round was randomly selected, with no replacement. Within each round, Cronbach’s alphas were greater than .78 for the three positive-IPANAT items and .72 for the three negative-IPANAT items. The correlations between the positive-IPANAT items and the negative-IPANAT items for any given round ranged from -.27 to .42 in the exclusion condition (10 out of the 25 correlations were significant at the $p = .05$ level, with p values for the remaining correlations ranging from .107 to .996, degrees of freedom ranged from 59 to 63), and from -.28 to .45 in the overinclusion condition (9 out of 25 correlations were significant at the $p = .05$ level, with p values for the remaining correlations ranging from .055 to .926, degrees of freedom ranged from 57 to 59). In addition, the results of analyses conducted separately for the positive-IPANAT and negative-IPANAT were highly similar. Thus, for the sake of simplicity and ease of presentation for each round, we computed one composite IPANAT score by reverse scoring the negative-IPANAT scores and averaging them with the positive-IPANAT scores.

Signature Size Task. The last measure in each set of questionnaires was always the Signature Size Task: at the very end of each round’s questionnaires, we asked participants to sign their name on a line, ostensibly, to affirm that they had completed the preceding tasks to the best of their ability. To compute a signature score for each round, we first drew a rectangle around each signature, fully encompassing it such that the length captured the full horizontal

breadth of the signature, and the width captured the full vertical stretch. We multiplied length and width together to calculate the area of the rectangle, which served as the Signature Size Task score.

Participants were excluded from the analysis of an implicit mood measure if their score for any of the rounds was three standard deviations or more away from the mean, or if one or more rounds of that measure had been left blank. This resulted in the exclusion of 8 participants in the exclusion condition (3 in the explicit self-report and 5 in the no self-report condition) and 6 participants in the overinclusion condition (3 explicit self-report, 3 no self-report). The analyses reported below reflect the exclusion of these outliers, but the results were relatively unchanged from analyses that did include them.

Data Analytic Strategy

All analyses were conducted within the exclusion and overinclusion conditions separately. Unless otherwise stated, general linear models (GLMs) with the five levels of round (that is, the degree of exclusion or overinclusion) as the within-subjects factor and self-report condition (that is, whether participants were asked to introspect or not) as the between-subjects factor were used for all primary dependent variables (e.g., fundamental needs in the explicit self-report condition, and implicit measures). The Greenhouse-Geisser correction for sphericity was performed for all instances in which sphericity was violated. Moreover, given the *a priori* prediction of a linear effect of round, as well as a linear interaction between round and self-report, the linear and quadratic contrasts for both the effect of round and the

interaction were examined; only statistically significant linear or quadratic contrasts are reported here. Finally, follow-up planned t-tests were performed in order to examine differences between individual rounds.

The Kolgorov-Smirnov test for normality showed that our data did not significantly deviate from normal distributions, with the exception of the first- and second-round IPANAT scores in both the exclusion and overinclusion conditions (D_s ranged from .12 to .13, p_s ranged from .014 to .044) and the third-, fourth-, and fifth-round Signature Size Task scores (D_s ranged from .11 to .18, p_s ranged from .001 to .021). Given these departures from normality, we ran all the GLMs again, but this time on log-transformed dependent variables. Results of the analyses using the log-transformed data were highly similar to the results obtained using the untransformed data. Furthermore, as a second approach for dealing with the non-normal distributions, we performed all analyses using the nonparametric Friedman's two-way ANOVA by ranks test. In contrast to GLM, Friedman's test does not assume that the dependent measures are normally distributed. Again, the results using the nonparametric tests produced similar results to the results of the GLMs on the untransformed data.

Results

Manipulation Check: Do People Perceive Being Excluded or Overincluded?

As expected, and replicating past work (Anderson & Zayas, 2012; Löckenhoff et al., 2012), in the exclusion condition, participants indicated that the

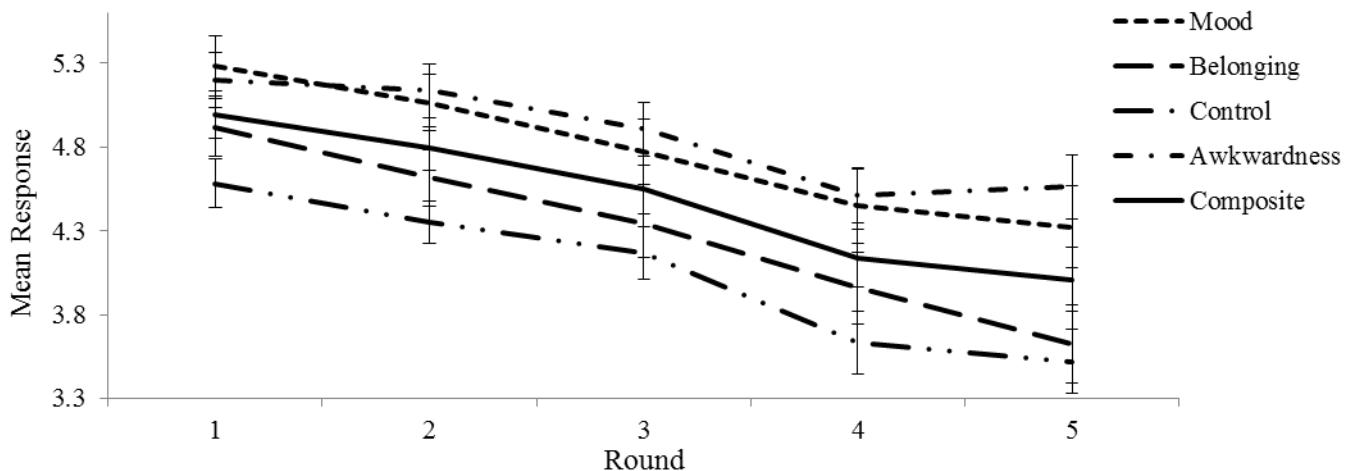


Figure 1. Changes in aggregate explicit mood and needs scores over the five rounds of progressive exclusion. In round 1, participants received 33.3% of the ball tosses, followed by 25.93% in round 2, 18.52% in round 3, 11.1% in round 4, and 3.7% in round 5. Error bars indicate $\pm 1 SE$.

EXCLUSION LOWERS EXPLICIT, NOT IMPLICIT MOOD

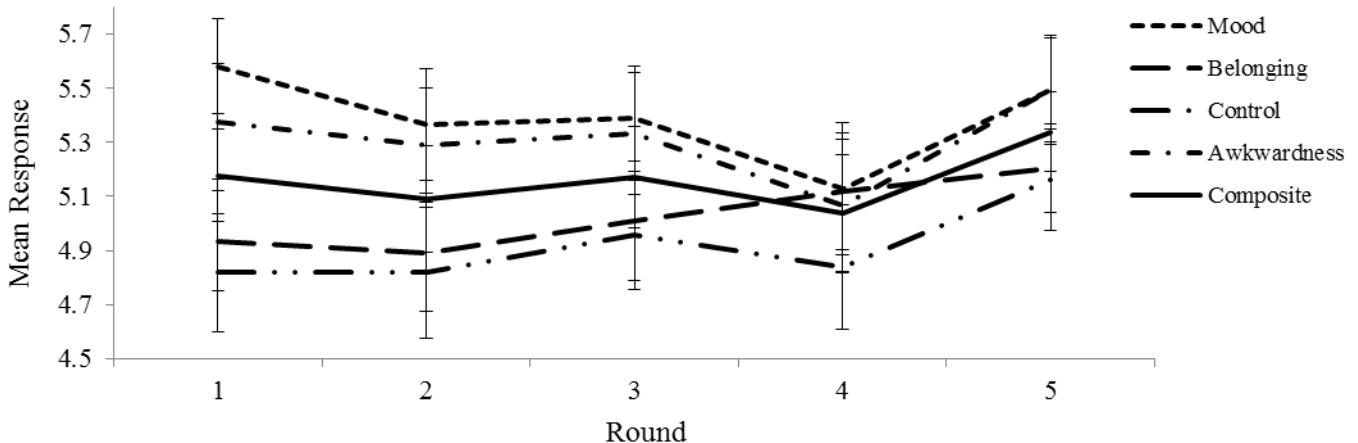


Figure 2. Changes in aggregate explicit mood and needs scores over the five rounds of progressive overinclusion. In round 1, participants received 33.3% of the ball tosses, followed by 37.04% in round 2, 40.74% in round 3, 44.44% in round 4, and 48.15% in round 5. Error bars indicate ± 1 SE.

other players had excluded them. They reported that they received the ball 25.64% ($SD = 12.16$) of the time from the other two players, which is significantly less than 50%, $t(63) = -16.03, p < .001$ (i.e., if participants had been included by both players, they would have reported receiving the ball from each player an average of 50% of the time). In the overinclusion condition, participants indicated that the other ostensible players had overincluded them. Participants reported that they received the ball an average of 57.05% ($SD = 11.44$) of the time from the other two players, which is significantly greater than 50%, $t(61) = 4.85, p < .001$.

Replicating Past Work: Does Progressive Exclusion or Overinclusion Impact Explicit Mood and Needs?

Before investigating the main questions of the present work, we aimed to assess the effects of progressive exclusion and progressive overinclusion on explicit mood and needs. This step is important because it provides evidence of the validity of the methods for manipulating social dynamics used in the present research.

As mentioned earlier, to simplify results, the explicit measures of mood, awkwardness, belonging,

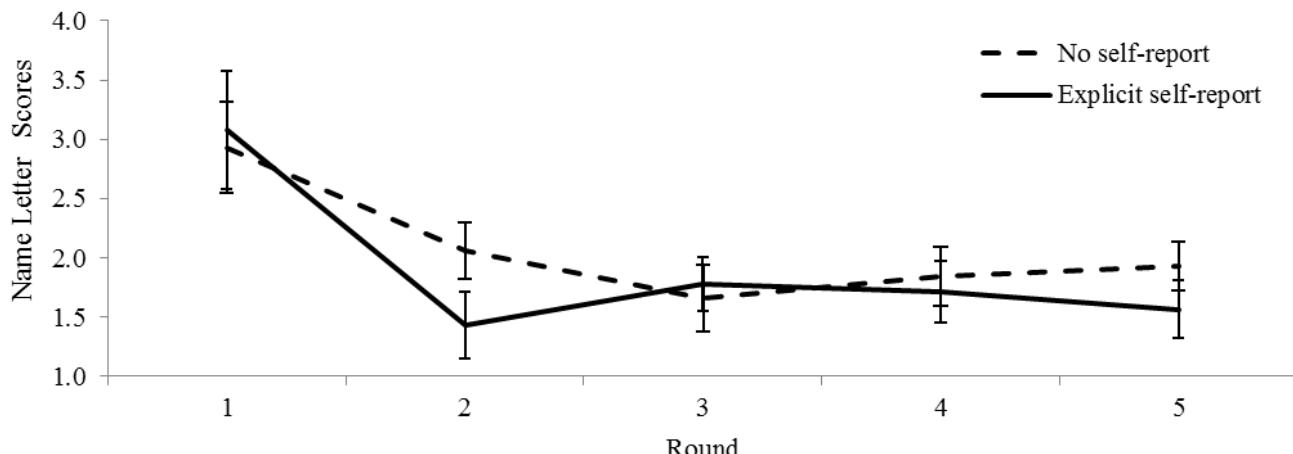


Figure 3. Changes in Name Letter scores over the five rounds of incremental exclusion. Error bars indicate ± 1 SE.

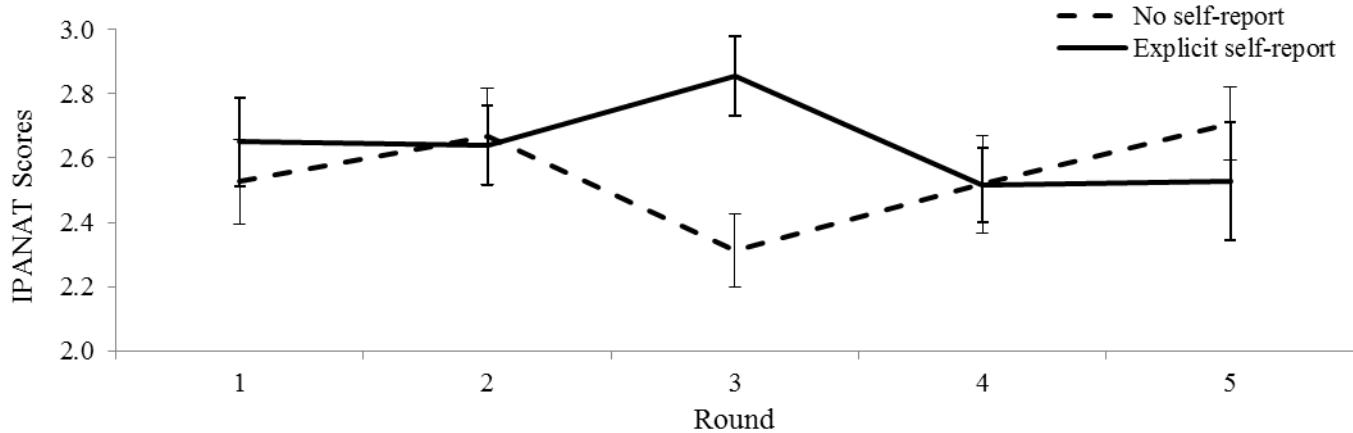


Figure 4. Changes in IPANAT scores over the five rounds of incremental exclusion. Error bars indicate ± 1 SE.

and control were represented in our analyses with a single aggregate mood-needs score, hereafter referred to as “explicit mood and needs.” In line with past work (Anderson & Zayas, 2012), progressive exclusion from rounds 1 to 5 resulted in reduced explicit mood and needs, $F(1.78, 55.1) = 25.28$, $p < .001$, $\eta_p^2 = .45$ (see Figure 1). A test of within-subjects contrast for exclusion showed a linear effect, $F(1, 31) = 34.92$, $p < .001$, $\eta_p^2 = .53$.

Also, replicating previous work failing to show any effect of being overincluded, in response to being progressively overincluded from rounds 1 to 5, participants did not experience an appreciable change in mood and needs, $F(2.45, 73.54) = 1.21$, $p = .310$, $\eta_p^2 = .04$ (see Figure 2).

Beyond Explicit Measures: Does Progressive Exclusion or Overinclusion Impact Implicit Mood and Self-Esteem?

Our main question was whether progressive exclusion would affect implicit mood and self-esteem, and if so, whether the effects would be more pronounced in the self-report condition in which participants are asked to think about their internal states. We predicted that in the exclusion condition, progressive exclusion would result in a linear decline in implicit mood and self-esteem scores, and that this decline may be more pronounced in the self-report condition as reflected by an interaction between magnitude of exclusion and self-report condition. In the next section, for ease of presentation and interpretation, we report results of analysis for the exclusion and overinclusion conditions separately. We discuss and interpret the meaning of these findings in the General Discussion section.

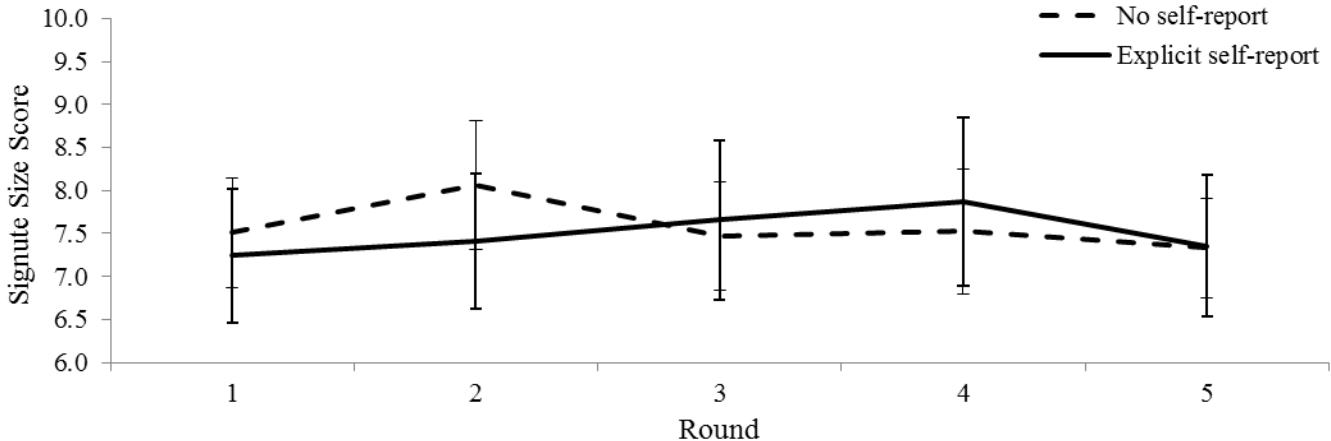


Figure 5. Changes in Signature Size scores over the five rounds of incremental exclusion. Error bars indicate ± 1 SE.

EXCLUSION LOWERS EXPLICIT, NOT IMPLICIT MOOD

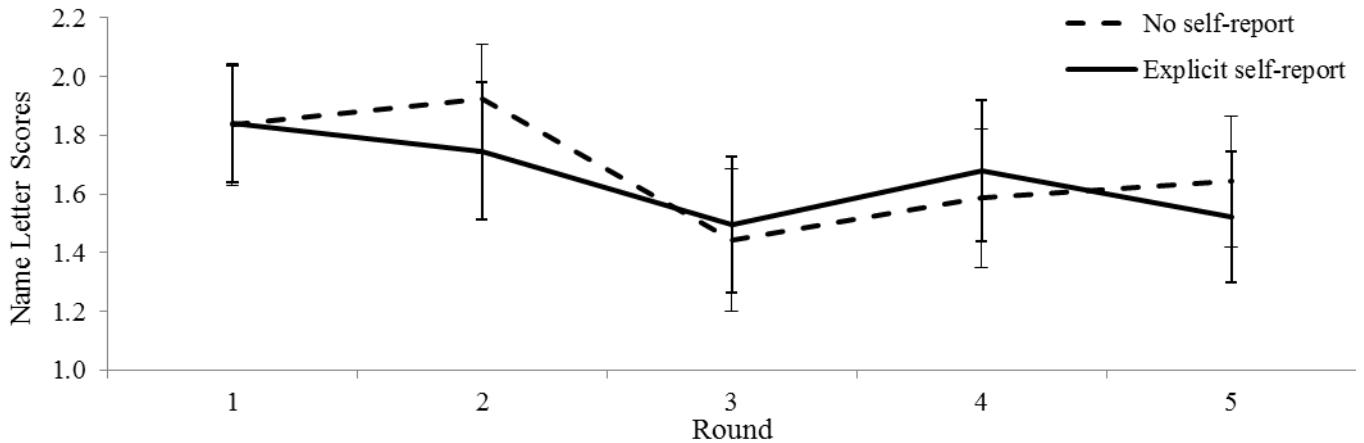


Figure 6. Changes in Name Letter scores over the five rounds of incremental overinclusion. Error bars indicate ± 1 SE.

Does Progressive Exclusion Impact Implicit Mood and Self-esteem, and Is It Affected by Self-Report Condition?

Name Letter Task. Progressive exclusion from rounds 1 to 5 resulted in lower Name Letter Task scores, $F(1.48, 90.18) = 13.53, p < .001, \eta_p^2 = .18$, but the interaction between round and self-report condition was not significant, $F(1.48, 90.18) = 1.17, p = .304, \eta_p^2 = .02$ (see Figure 3). Follow-up tests examining differences between the self-report conditions at each round of Cyberball showed a statistically significant difference in IPANAT scores at round 2, $t(60) = 3.25, d = .89, p = .002$ ($M_{\text{explicit self-report}} = 2.86, M_{\text{no self-report}} = 2.31$), which runs counter to predictions, and no statistically significant difference between groups for the other rounds (Cohen's d ranged from .002 to .17; all $p > .399$).

IPANAT. Progressive exclusion from rounds 1 to 5 did not result in lower IPANAT scores, $F(4, 240) =$

0.25, $p = .907, \eta_p^2 = .0004$; the interaction between round and self-report condition was also not significant, $F(4, 240) = 1.91, p = .109, \eta_p^2 = .03$ (see Figure 4). Follow-up tests examining differences between the self-report conditions at each round of Cyberball showed a statistically significant difference in IPANAT scores at round 2, $t(60) = 3.25, d = .89, p = .002$ ($M_{\text{explicit self-report}} = 2.86, M_{\text{no self-report}} = 2.31$), which runs counter to predictions, and no statistically significant difference between groups for the other rounds (Cohen's d ranged from .002 to .17; all $p > .399$).

Signature Size Task. Progressive exclusion from rounds 1 to 5 did not result in smaller signatures, $F(3.06, 171.13) = 0.68, p = .569, \eta_p^2 = .01$; the

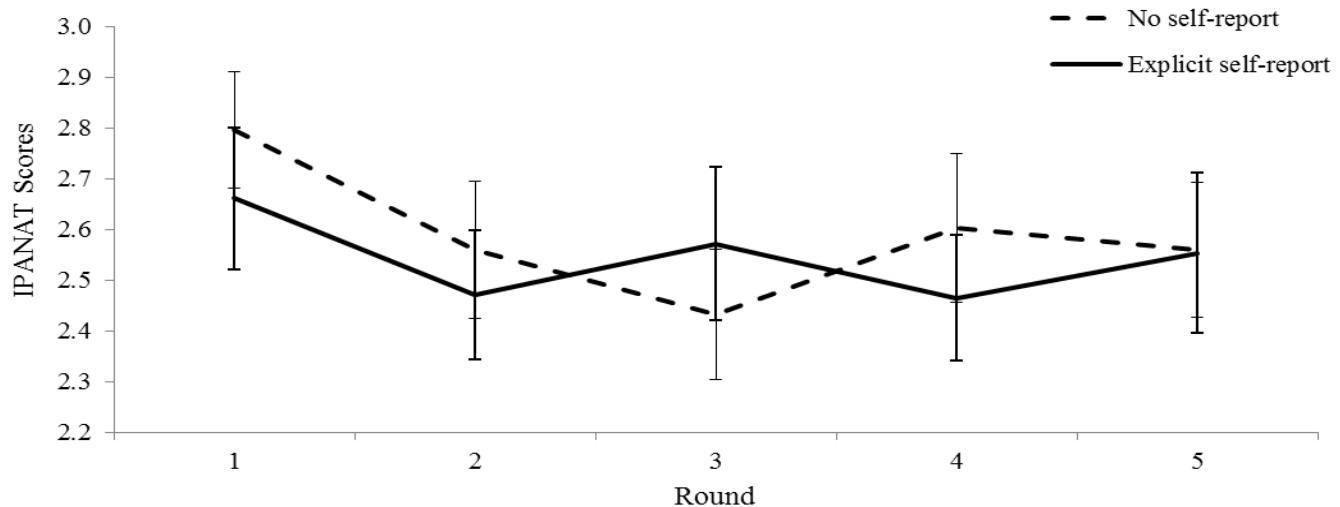


Figure 7. Changes in IPANAT scores over the five rounds of incremental overinclusion. Error bars indicate ± 1 SE.

interaction between round and self-report condition was also not significant, $F(3.06, 171.13) = 0.81$, $p = .492$, $\eta_p^2 = .01$ (see Figure 5). Follow-up tests examining differences between the self-report conditions at each round of Cyberball showed no statistically significant differences (Cohen's d ranged from .01 to .16; all $ps > .553$).

Does Progressive Overinclusion Impact Implicit Mood and Self-Esteem, and Is It Affected by Self-Report Condition?

Name Letter Task. Interestingly, progressive overinclusion from rounds 1 to 5 also resulted in lower Name Letter Task scores, $F(3.46, 203.85) = 2.72$, $p = .038$, $\eta_p^2 = .04$, but the interaction between round and self-report condition was not significant, $F(3.46, 203.85) = 0.34$, $p = .824$, $\eta_p^2 = .01$ (see Figure 6). A test of within-subjects contrasts for overinclusion showed a linear effect of round, $F(1, 59) = 4.46$, $p = .039$, $\eta_p^2 = .07$, but no quadratic effect, $F(1, 59) = 1.58$, $p = .214$, $\eta_p^2 = .03$. Follow-up tests examining differences between the self-report conditions of Cyberball showed no statistically significant differences (Cohen's d ranged from .001 to .15; all $ps > .556$).

IPANAT. Progressive overinclusion from rounds 1 to 5 did not affect IPANAT scores, $F(4, 228) = 0.89$, $p = .474$, $\eta_p^2 = .02$; the interaction between round and self-report condition was also not significant, $F(4, 228) = 0.35$, $p = .844$, $\eta_p^2 = .01$ (see Figure 7). Follow-up tests examining differences between the self-report conditions at each round of Cyberball showed no statistically significant differences (Cohen's d ranged from .01 to .20; all $ps > .671$).

Signature Size Task. Progressive overinclusion from rounds 1 to 5 did not affect signature size, $F(3.52, 193.43) = 0.77$, $p = .530$, $\eta_p^2 = .01$; the interaction between round and self-report condition was also not significant, $F(3.52, 193.43) = 0.79$, $p = .517$, $\eta_p^2 = .01$ (see Figure 8). Follow-up tests examining differences between the self-report conditions at each round of Cyberball showed no statistically significant differences (Cohen's d ranged from .0005 to .26; all $ps > .345$).

General Discussion

To date, most research on social exclusion has examined explicit responses to exclusion, responses which participants deliberate about and report to the experimenter. As a result, the literature is well informed about people's conscious reactions to exclusion, but it knows relatively little about people's implicit reactions to exclusions, or about the impact of instructing people to reflect on exclusion. The primary aim of the present work was to examine changes in implicit mood and self-esteem as they unfold in a social dynamic involving ambiguous exclusion or overinclusion. The secondary aim was to explore the effect of introspection on those implicit processes, to examine whether drawing participants' attention to their social experience might enhance their processing of social cues.

To address these areas of inquiry, we adapted the procedures used by Anderson and Zayas (2012). Specifically, participants were either progressively excluded or overincluded in a modified version of the virtual ball-tossing game, Cyberball. Moreover, to assess participants' responses to ambiguous social

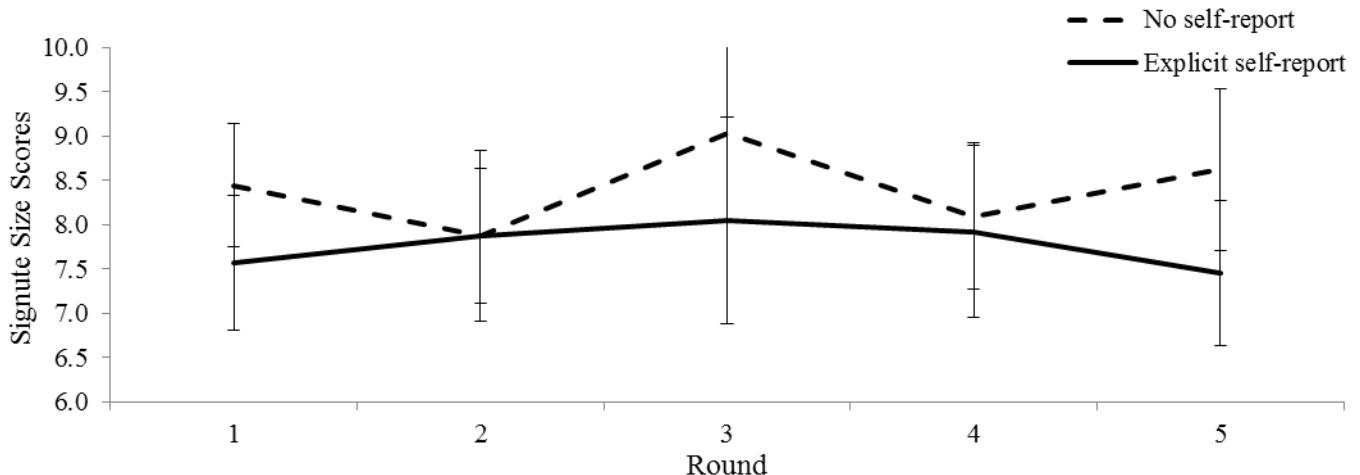


Figure 8. Changes in Signature Size scores over the five rounds of incremental overinclusion. Error bars indicate ± 1 SE.

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dynamics, we asked them to report on their feelings and moods resulting from being excluded and included; within each of the exclusion and overinclusion conditions, half of the participants completed both explicit and implicit measures of mood and needs following each round of the game, and the remaining half completed only implicit measures.

Based on Anderson and Zayas' (2012) work showing the impact of progressive social exclusion on explicit mood and needs, as well as based on the idea that explicit and implicit mood measures should tap into the same construct, we hypothesized that participants' implicit responses to exclusion and overinclusion should follow the same pattern as their explicit responses. We also predicted, based on the literature on the effects of introspection, that participants asked to self-report on their mood and psychological needs following each round of progressive exclusion would show worse implicit mood and self-esteem scores than participants not asked to self-report. Regarding the effects of self-report following each round of progressive overinclusion, we made no *a priori* predictions, given that Anderson and Zayas (2012), the sole other study on this topic, found no overall effect of overinclusion on explicit mood; instead, we treated these analyses as exploratory. We did not find clear support for either of our hypotheses: first, neither progressive exclusion nor progressive overinclusion significantly affected participants' implicit measure scores. Contrary to our predictions, implicit mood and self-esteem did not clearly decline throughout progressive exclusion. Specifically, the IPANAT and Signature Size Task did not show declines with progressive exclusion. The only exception was the Name Letter Task, which did show decreases as a function of progressive exclusion. But, as we describe below, none of the implicit measures, even the Name Letter Task, showed evidence of construct validity. With regard to the overinclusion condition, implicit mood and self-esteem measures were relatively unaffected by progressive overinclusion. Here, too, only the Name Letter Task showed decreases as a function of progressive overinclusion, while the IPANAT and Signature Size Task did not. Second, there was no significant difference between implicit scores for participants who completed introspection-inducing self-reports versus no self-reports. Whereas we had expected introspection to exacerbate the effects of progressive exclusion, we instead found that there was no significant difference in implicit mood

and self-esteem between the introspection groups, for both the exclusion and overinclusion conditions. In other words, completing self-reports following each round of the Cyberball game did not magnify (or dampen) responses on the implicit measures.

Interpretation of The Null Results Involving Implicit Mood and Self-Esteem

The finding that exclusion and overinclusion did not appreciably affect implicit mood and self-esteem is particularly surprising. One concern is that perhaps our methods differed from those used in previous work and this might have contributed to the null effect with regard to implicit mood. This possibility is highly unlikely given that the progressive exclusion and overinclusion manipulations did, in fact, work in the present study, successfully replicating past findings by Anderson and Zayas (2012) and Löckenhoff et al. (2012): participants' scores for mood and psychological needs in the explicit self-report condition were significantly affected by the exclusion manipulation, and not considerably altered by the overinclusion manipulation.

An alternative possibility might be a lack of statistical power to find the expected effect. But in both the exclusion and overinclusion conditions, the statistical power to detect a medium effect (Cohen's $d = .50$) was above .97 due to our relatively large sample sizes. Consequently, although null findings are not easily interpretable (i.e., it is not possible to claim "no effect"), we would have been very likely to detect it if exclusion or overinclusion had affected implicit mood and self-esteem to a moderate degree.

It is also possible that the implicit measures used in this study were not valid measures in this context. One way to assess a measure's construct validity is by examining how it correlates with other measures purportedly tapping into the same construct. In the present study, we would expect implicit measures to correlate with each other, given that they all reflect implicit mood and self-esteem. Additionally, we would also expect implicit measures to correlate with explicit measures of mood. Surprisingly, the present study found either weak or no correlations among the three implicit measures within a given round (r_s ranged from -.18 to .15; by comparison, r_s for the four subscales of the explicit measures ranged from .46 to .90). Moreover, the data showed either weak or no associations between the explicit and implicit measures (r_s for round 1 scores for aggregated explicit

mood and needs, and each of the implicit measures ranged from $-.13$ to $.27$, which clearly does not support the idea that the explicit and implicit measures tap into the same construct, at least to some extent. With 126 participants, our design allowed us to detect a medium-sized correlation 93.9% of the time; the fact that we did not find any significant correlation among the three implicit measures or between implicit and explicit measures suggests that the relationship between these theoretically related measures is, in actuality, trivial. These findings raise questions about the construct validity of these implicit measures and corroborate Bosson et al.'s (2000) work on the limited psychometric utility of some implicit self-esteem measures.

Moreover, given that there was an effect of exclusion on the Name Letter Task, it might be reasonable to assume that it is a more sensitive implicit measure compared to the IPANAT and Signature Size Task. However, a closer look at the data suggests that this is not the case, and that the effects observed on the Name Letter Task may be due less to effects of exclusion and more to effects of repeated administration. That is, the Name Letter Task did not correlate with the other two implicit measures in any of the rounds, and neither did it correlate with the explicit measures. This casts doubt on what the Name Letter Task is assessing. Moreover, not only was a linear trend over time observed in the exclusion condition, but a similar trend was also observed in the overinclusion condition. There is no reason that self-esteem should decrease as a result of being mildly more included. Thus, collectively, the data suggest that the finding involving the Name Letter Task is more likely to be related to the effect of time and repetition of the task than to the effect of being excluded (or overincluded) raise questions regarding the validity of such commonly used implicit measures. Refining existing and developing new implicit measures that assess mood, psychological needs, and self-esteem is an integral precursor to enhancing knowledge of how individuals perceive and respond to various social interactions, especially those that involve subtle social dynamics.

Limitations and Future Directions

Although the present work aimed to advance knowledge of responses to social dynamics in a number of ways — for example, by investigating responses to subtle exclusion using progressive exclusion, assessing implicit as well as explicit

processes, and exploring responses to a novel social dynamic (overinclusion) — many questions remain for future work. A key finding in the present work was the absence of any effects of exclusion on implicit measures of mood and self-esteem. Future work should consider ways of potentially improving on the methodology. One possibility is to use measures with more reliable psychometric properties such as the Implicit Association Test (IAT: Greenwald, McGhee, & Schwartz, 1998; Zayas & Shoda, 2005). Another promising avenue for further elucidating the cognitive mechanisms underlying the response to progressive exclusion is to depend on more reliable unobtrusive measures. Recording continuous electroencephalogram (EEG) while participants complete the same tasks as in the present study may provide an ongoing, sensitive measure of the affective processes triggered by social exclusion. Critically, the use of EEG would not require directly asking participants about their feelings. A particular index of interest is frontal EEG asymmetry, which has been found to be associated with state-related emotional changes and responses (for a review, see Coan & Allen, 2004). Specifically, greater right-versus-left frontal activation is associated with withdrawal behaviors and negative affect in general (Wheeler, Davidson, & Tomarken, 1993). Future research might use right-versus-left frontal activation levels as an indicator of affective state.

Conclusion

Past research has consistently shown that human beings are extraordinarily in tune with signs of being included or excluded from their social groups, and can suffer both psychologically and physically when their belonging needs are threatened. However, most existing research has focused primarily on people's explicit responses to situations involving clear-cut, non-ambiguous social exclusion. The present study is one of the few studies to investigate the implicit processes that occur in response to situations involving more subtle and less obvious forms of exclusion, as well as to examine the possible impact of completing self-reports about mood and self-esteem on mood and self-esteem themselves.

The present study found that people are, indeed, very sensitive to subtle cues of exclusion, corroborating existing work (Anderson & Zayas, 2012; Löckenhoff et al., 2012). Crucially, however, this sensitivity was only observed for explicit mood and psychological needs. Quite surprisingly, contrary

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to expectation, implicit mood and self-esteem were relatively unaffected by subtle social exclusion and were not appreciably affected by introspection (i.e., completing self-reports). Given the high statistical power of our study to detect medium effects, and analyses of the psychometric properties of the implicit measures used in the present work, these null findings raise questions regarding the validity of such commonly used implicit measures. Refining existing and developing new implicit measures that assess mood, psychological needs, and self-esteem is an integral precursor to enhancing knowledge of how individuals perceive and respond to various social interactions, especially those that involve subtle social dynamics.

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L'effet modérateur de la congruence des valeurs entre les employés et l'organisation sur le lien entre le leadership laisser-faire et la détresse psychologique

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Les entreprises à travers le monde ont besoin d'employés en bonne santé psychologique et de leaders pour les guider dans l'atteinte de leurs buts. Le style de leadership laisser-faire et ses conséquences sur la détresse psychologique des employés sont peu étudiés. Cette étude explore cette question et cherche à vérifier si la congruence des valeurs entre l'employé et l'organisation modère le lien entre le leadership laisser-faire et la détresse perçue par l'employé. Les données ont été recueillies par questionnaire auprès de 426 Québécois travaillant dans différents milieux. Les résultats montrent que le leadership laisser-faire a un impact négatif chez les personnes percevant une haute congruence entre leurs valeurs et celles de leurs organisations, mais n'a aucun impact significatif chez les gens ne percevant pas cette congruence. Les implications de ces résultats sont détaillées dans la discussion.

Mots-clés : leadership, laisser-faire, détresse psychologique, congruence, valeur

Companies around the world need employees in good psychological health and leaders to guide them to achieve their goals. Laissez-faire leadership and its consequences on the psychological distress of employees have not been frequently studied. This study addresses this issue and also verifies if value congruence between the employee and the organisation moderates the link between laissez-faire leadership and perceived employee distress. The data was collected by questionnaire from 426 Quebecers working in different environments. The results show that laissez-faire leadership has a negative impact upon people who perceive a high congruence between their values and the ones from their organisation, but no significant impact upon employees not perceiving this congruence. The implications of these results are detailed in the discussion.

Keywords: leadership, laissez-faire, psychological distress, congruence, value

En France, un suicide par jour serait causé par le travail. Chez France Télécom, 25 personnes se sont enlevé la vie dans le courant d'une année et demie (Rambert, 2009). Au Québec, dans la région de Montréal, sept employés de Postes Canada se sont donné la mort au cours des deux dernières années et demie (Bellerose, 2013). Ces chiffres accablants révèlent l'impact important du milieu de travail sur le bien-être psychologique des employés. D'ailleurs,

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des employés de France Télécom blâment le fonctionnement managérial d'avoir utilisé des méthodes de gestion du personnel qui ont eu pour effet de fragiliser psychologiquement les salariés (Le Monde, 2012). Une étude récente a été faite auprès de trois centres d'appels de sociétés de télé-communication et de câblodistribution québécoises et montre que 57% des employés vivent de la détresse psychologique au travail (Duchaine, 2014). La surcharge de travail et le manque d'autonomie par rapport aux patrons font partie des causes de leur détresse (Duchaine, 2014). Le style de leadership des superviseurs est donc une partie importante des désagréments vécus par l'employé. Ainsi, il est essentiel de favoriser un bon environnement de travail avec de bons leaders pour diminuer la souffrance

psychologique éprouvée par les salariés, facteur souvent lié au suicide en milieu de travail.

Le leadership laisser-faire est présent chez un leader qui se voit attribuer un titre de dirigeant au sein d'une organisation, mais qui en pratique a tendance à négliger toutes les responsabilités, et les tâches qui lui sont assignées et sont associées à cette position (Lewin, Lippitt, & White, 1939). Les théories sur le leadership se basent généralement sur la supposition que les leaders influencent, par l'impact qu'ils ont sur leurs subordonnés, la performance des individus et des groupes qui contribuent à l'atteinte d'objectifs larges des organisations (Ilies, Nahrgang, & Morgeson, 2007). La présence d'un style de leadership destructeur, tel que le leadership laisser-faire, peut entraver le développement d'un environnement de travail sain. Un leader destructeur est défini comme étant quelqu'un qui fait preuve de comportements ayant une incidence néfaste sur la performance et la santé au travail du salarié (Yukl, 2002). Puisque l'étude de Skogstad, Einarsen, Torsheim, Aasland et Hetland (2007) semble démontrer qu'il existe un lien entre le leadership laisser-faire et la détresse psychologique, il devient utile de mieux comprendre les effets d'un leadership de style laisser-faire dans le but d'améliorer le bien-être psychologique des salariés. D'ailleurs, cette absence de leadership (c.-à-d., le leadership laisser-faire) est tout de même assez prévalente dans les entreprises. En effet, 21,2% des employés auraient déjà été exposés à un leader de type laisser-faire (Aasland, Skogstad, Notelaers, Nielsen, & Einarsen, 20F10). Il est donc important que les entreprises soient conscientisées par rapport aux effets potentiels de ce type de leadership sur la détresse, et des facteurs qui peuvent influencer l'impact de ce dernier. Néanmoins, rares sont les recherches empiriques qui font des liens entre le leadership laisser-faire et les facteurs de stress au travail ou les conséquences sous la forme de détresse (Rayner & Cooper, 2003; Tepper, 2000; Zellars, Tepper, & Duffy, 2002).

La détresse psychologique réfère à la détresse émotionnelle subjective que ressent l'individu (McDowell & Newell, 1996). Plus le niveau de détresse augmente, plus les chances d'un diagnostic de maladie mentale augmentent (Fortin et al., 2006). La détresse psychologique, ainsi que les symptômes dépressifs, sont souvent cooccurrents avec d'autres maladies chroniques et mènent à une plus faible qualité de vie (Baune, Adrian, & Jacobi, 2007; Fenn et al., 2005; Muller-Tasch et al., 2007). Parmi les

conséquences, on retrouve une utilisation plus grande du système de santé (Baune et al., 2007; Koopmans, Donker, & Rutten, 2005), une faible adhérence aux traitements médicaux, et une augmentation significative des journées de congé de maladie (Demeyttaere et al., 2006). La santé et le bien-être des employés devraient intéresser les organisations, car un salarié malade peut entraîner des coûts pour les journées de maladie et les assurances, s'il y a lieu. De plus, le niveau de santé est relié à un aspect primordial pour les entreprises : la productivité (Wang et al., 2003). Toutefois, il y a peu de recherches sur la prévalence de la détresse psychologique chez les employés ou sur les facteurs de risque (Hilton et al., 2008). Il est donc pertinent de trouver des façons de diminuer la détresse chez les travailleurs ayant un patron faisant preuve de leadership laisser-faire afin d'aider les organisations.

À ce sujet, Amos et Weathington (2008) suggèrent que si les employés concordent bien avec l'organisation pour laquelle ils travaillent, ils sont plus portés à avoir une attitude positive et à adopter des comportements bénéfiques pour l'entreprise. Ces liens ont déjà été étudiés dans le passé et plusieurs études en ont confirmé les conséquences positives (Boxx, Odom, & Dunn, 1991; Posner, 1992; Saks & Ashforth, 1997; Sekiguchi, 2004; Ugboro, 1993).

Afin de permettre de potentielles améliorations dans les entreprises ainsi que possiblement préserver le bien-être psychologique des salariés, la présente étude cherchera à savoir si la compatibilité des valeurs de l'employé avec celles de son organisation peut venir modérer le lien entre le leadership laisser-faire et la détresse psychologique. Le concept de congruence des valeurs entre l'employé et l'organisation est prévu comme étant un levier important sur la santé en présence de leadership laisser-faire et semble donc être une bonne piste de recherche afin de diminuer la détresse chez les employés.

Le leadership laisser-faire

Le leadership laisser-faire, avec les leaderships transformationnel et transactionnel, fait partie du *full-range model of leadership* (Bass & Avolio, 1994). Ce modèle basé sur plus de 100 ans de recherche en leadership comprend tous les comportements transactionnels et transformationnels. Alors que les leaders transformationnels motivent leurs employés en leur transmettant une vision inspirante et que les leaders transactionnels offrent des avantages en retour

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de services rendus, les leaders laisser-faire ne sont pas actifs dans leur rôle de gestionnaires. Par conséquent, selon Bass et Avolio (1994), les décisions que le leader laisser-faire doit prendre sont généralement repoussées. De plus, il n'apporte aucune rétroaction ou récompense auprès de ses employés, ne tente en aucun cas de motiver ces derniers et ne prend pas en considération leurs besoins afin de les satisfaire.

La détresse psychologique au travail

D'après les articles de Keyes (2003) et de Massé et ses collaborateurs (1998a), la détresse psychologique est établie comme étant une des principales composantes négatives de la santé psychologique. Compte tenu de ces informations, elle est généralement le concept le plus étudié lorsqu'il est question de santé psychologique (Maddux, 2008; Préville, Boyer, Potvin, Perrault, & Légaré, 1992). Selon le modèle de Massé et ses collègues (1998b), la détresse psychologique se décompose en quatre facteurs distincts, soit l'auto-dévalorisation (être autocritique, diminution de l'estime de soi), l'irritabilité et l'agressivité (arrogance, être en conflit ou en colère), l'anxiété et la dépression (tristesse, préoccupation, stress) et le désengagement social (désintérêt, être moins réceptif à son entourage).

Liens entre le leadership laisser-faire et la détresse psychologique

Peu d'études ont cherché à établir un lien entre le leadership laisser-faire et la détresse psychologique (Rayner & Cooper, 2003; Tepper, 2000; Zellars et al., 2002). Or, selon Hetland (2005), il existe une relation systématique entre les comportements véhiculés par un leader laisser-faire et l'épuisement professionnel chez les subordonnés. Cet épuisement professionnel ressenti chez les employés semble être représentatif de la composante « désengagement » de la détresse psychologique telle que définie précédemment. Parallèlement, Leiter et Maslach (1988) suggèrent une relation positive entre l'épuisement émotionnel et la relation désagréable que les employés maintiennent avec leur supérieur et leurs collègues de travail. Ainsi, les comportements négatifs du leader laisser-faire envers ses travailleurs sont directement corrélés à des effets perturbateurs sur la santé physique et psychologique de ces derniers.

Une étude de Skogstad et ses collaborateurs (2007) présente un modèle explicatif de l'effet du leadership

laisser-faire sur la détresse psychologique au travail. Tel que mentionné précédemment, ces auteurs proposent que les comportements d'un leader laisser-faire soient liés positivement à un environnement de travail stressant. En fait, le leadership laisser-faire occasionnerait un environnement propice aux conflits de rôles entre le dirigeant et ses subordonnés, à l'ambiguité de rôles chez les employés, et aux conflits entre les collègues de travail. Ces facteurs de stress encourageraient par la suite le phénomène d'intimidation au travail qui est lui-même lié à la détresse psychologique (Barling, 1996; Björkquist, Österman, & Hjeltebäck, 1994; Brodsky, 1976; Keashly, Trott, & MacLean, 1994; Spratlen, 1995; Tepper, 2000).

La congruence des valeurs

Pour comprendre la congruence des valeurs, il est important d'indiquer ce que sont des valeurs puisque ce concept peut être défini de plusieurs façons. Une définition propre au monde du travail et des organisations serait : un standard évaluatif relié au travail ou à l'environnement de travail par lequel l'individu discerne ce qui est bon ou évalue l'importance des préférences (Dose, 1997). La congruence des valeurs, quant à elle, est définie, dans un contexte de travail, comme la compatibilité entre les valeurs d'un individu et celles de l'organisation pour laquelle il travaille (O'Reilly, Chatman, & Caldwell, 1991). De plus, il existe deux types de congruence : subjective (*subjective fit*), c'est-à-dire la compatibilité perçue par le travailleur, et objective (*objective fit*), c'est-à-dire la congruence entre l'individu et l'organisation indépendamment des perceptions de l'employé (French, Rodgers, & Cobb, 1974; Kristof-Brown, Zimmerman, & Johnson, 2005). Dans cette recherche, il est question d'une compatibilité subjective puisque les résultats se basent sur les réponses au questionnaire des subordonnés et non de l'employeur ou de l'organisation.

Les études sur la compatibilité des valeurs entre l'employé et l'organisation suggèrent que cette congruence serait bénéfique tant pour l'un que pour l'autre. Amos et Weathington (2008) reconnaissent que les salariés travaillant pour une entreprise avec laquelle ils croient partager les mêmes valeurs sont plus satisfaits de leur travail et de l'organisation en soi. Ils éprouvent aussi un sentiment d'engagement affectif et normatif par rapport à l'organisation. Les résultats d'une autre recherche suggèrent que la compatibilité des valeurs entre l'organisation et le subordonné,

lorsque ce dernier commence à travailler pour l'organisation, est corrélée positivement avec les affects positifs et négativement avec l'intention de quitter un an plus tard (O'Reilly et al., 1991). Cette étude soutient aussi qu'un bon *person-organisation fit* (P-O fit) engendre des effets positifs indépendamment du genre, de l'âge ou de la fonction de l'individu. Le P-O fit désigne la compatibilité générale entre la personne et son organisation (Amos & Weathington, 2008). Puisque les instruments de mesure du P-O fit évaluent principalement la congruence des valeurs entre le salarié et l'organisation, il peut être stipulé que lorsque le P-O fit est évalué, la congruence des valeurs l'est aussi (O'Reilly et al., 1991).

Lien entre la congruence des valeurs et la détresse psychologique

Puisque ces études suggèrent que la congruence des valeurs a plusieurs impacts positifs sur l'organisation ainsi que sur les travailleurs, il est possible que cette congruence favorise aussi une bonne santé psychologique chez les employés. D'ailleurs, l'étude de Dextras-Gauthier, Marchand et Haines (2012) énonce que les valeurs peuvent avoir un effet sur la santé mentale des individus. La culture organisationnelle, définie par les valeurs que prône l'organisation, détermine les conditions de travail organisationnel qui, quant à elles, ont une influence sur la santé mentale des salariés. En plus, l'étude de Merecz et Andysz (2012) postule qu'il y a un lien entre le P-O fit et la santé mentale : un haut niveau de congruence entre l'employé et l'organisation est lié à une bonne santé mentale. Puisque la congruence des valeurs est un aspect important du P-O fit, il serait possible qu'elle corrèle aussi avec une bonne santé psychologique chez les subordonnés. Toutefois, aucune recherche n'a encore établi de lien direct entre la congruence des valeurs et la détresse psychologique.

Leadership, congruence des valeurs et détresse psychologique

L'effet modérateur de la congruence des valeurs sur la relation entre le leadership laisser-faire et la détresse psychologique n'a pas encore été étudié, ce qui ajoute à la pertinence de cette recherche. Ces variables ont déjà été étudiées ensemble dans certaines études, mais de façons différentes. Par exemple, dans l'étude de Hoffman, Bynum, Piccolo et Sutton (2011), la congruence des valeurs entre l'employé et

l'organisation ainsi qu'entre le leader et l'employé sont utilisées, mais comme variables médiateuses du lien entre le leadership transformationnel et l'efficacité de l'unité au travail. Ces auteurs affirment que lorsqu'il y a une meilleure congruence de valeurs entre l'organisation et le travailleur, l'efficacité de l'unité de travail est meilleure et la compatibilité des valeurs entre le leader et le subordonné n'a plus aucun impact. Ainsi, la bonne compatibilité des valeurs entre l'organisation et le salarié a un effet médiateur sur la relation entre le leadership transformationnel et l'efficacité de l'unité de travail.

Dans l'étude d'Erdogan, Kraimer et Liden (2004), le lien entre le leadership et la congruence des valeurs est établi avec la satisfaction avec la carrière. Dans cette étude, le *leader-member exchange* (LMX), qui est un type de leadership où le dirigeant se concentre sur l'augmentation du succès de l'organisation en développant principalement une relation réciproque et de qualité avec chacun de ses subordonnés (Graen & Uhl-Bien, 1995), est utilisé comme variable pour étudier l'effet de la congruence des valeurs sur la satisfaction avec la carrière. Les résultats suggèrent que lorsque la qualité de la relation entre l'employé et le leader est mauvaise, la congruence des valeurs a un effet positif sur la satisfaction avec la carrière. Toutefois, pour une relation de bonne qualité, aucun impact n'est relevé. Cela indique que lorsqu'il y a une mauvaise relation entre le subordonné et le leader, la congruence des valeurs peut avoir un effet positif.

Ces études proposent donc que la congruence des valeurs puisse avoir des conséquences positives sur les travailleurs composant avec des supérieurs possédant différents types de leadership, notamment de type négatif comme mentionné dans l'exemple soulevé de l'étude d'Erdogan et ses collaborateurs (2004). Ceci est dû au fait que l'être humain, fondamentalement, cherche une identité sociale qui lui donne une signification et à laquelle il peut se connecter (O'Reilly et al., 1991). L'organisation dans laquelle il travaille permet de lui procurer une identité sociale : l'identification à l'organisation est une forme spécifique d'identité sociale (Ashforth & Mael, 1989). La congruence des valeurs avec l'organisation permet donc cette identification, favorise l'intégration à l'environnement de travail et ainsi, est bénéfique pour le salarié (O'Reilly et al., 1991).

En somme, la congruence des valeurs est favorable pour l'organisation ainsi que pour les travailleurs. Il serait donc possible que cette compatibilité des

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valeurs ait aussi l'effet de diminuer la souffrance psychologique liée au style de leadership laisser-faire. Ainsi, le fait d'avoir une compatibilité des valeurs entre les employés et l'organisation devrait atténuer la détresse psychologique due au style laisser-faire.

Hypothèse

La relation positive entre le leadership laisser-faire et la détresse psychologique sera modérée par la congruence des valeurs entre l'employé et l'organisation. De fait, la congruence des valeurs modérera la relation en inhibant les effets négatifs du leadership laisser-faire sur la détresse.

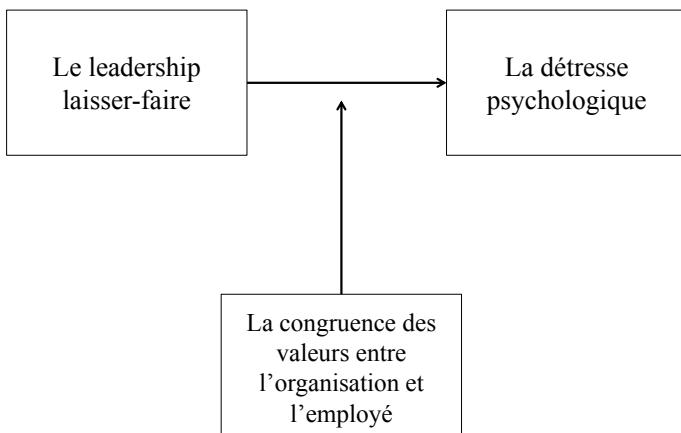


Figure 1. Effet modérateur de la compatibilité des valeurs de l'entreprise avec celles des employés sur le lien entre le leadership laisser-faire et la détresse psychologique.

Méthodologie

Collecte de données

Les données ont été recueillies par un questionnaire auprès de 426 Québécois travaillant dans différents milieux et complétés de façon anonyme et volontaire via un site internet sur une période d'un mois. Le Tableau 1 contient la description détaillée de l'échantillon.

L'échantillon de participants est dit « de convenance », car le lien internet a été envoyé à des employés venant de milieux de travail variés à travers le réseau de contacts des chercheurs par l'entremise de courriels et de différents réseaux sociaux tels que Facebook. L'échantillonnage n'est donc pas aléatoire.

Instruments de mesure

Le leadership laisser-faire. Le leadership laisser-faire ne comporte qu'une seule dimension de mesure, qui évalue la tendance des superviseurs à éviter les responsabilités managériales, éviter la prise de décisions, hésiter à agir et ne pas toujours être disponible lorsque nécessaire (Judge & Piccolo, 2004). L'item d'évaluation du laisser-faire de l'étude de Doucet, Poirier et Chênevert (2009) a été adapté en français à partir du questionnaire par Avolio, Bass et Jung (1999). Dans la présente étude, deux items reflétant la définition du construit ont été ajoutés dans l'optique de permettre une mesure plus fidèle en fonction de la définition de ce type de leadership faite par Bass et Avolio (1994). Les items demandaient d'indiquer la fréquence sur une échelle en cinq points allant de « *jamais* » à « *fréquemment, sinon toujours* » de certains comportements chez le supérieur immédiat.

Tableau 1
Description de l'échantillon

Informations socio-démographiques	Pourcentage de l'échantillon
Sexe	
Homme	41,1%
Femme	58,9%
Âge	
25 ans et moins	47,9%
26-45 ans	35,0%
46 ans et plus	17,1%
Niveau de scolarité	
Secondaire V ou moins	14,6%
Diplôme d'études professionnelles	12,0%
Diplôme d'études collégiales	33,6%
Diplôme universitaire	39,7%
Nombre d'années au sein de l'organisation	
Moins de 6 mois	10,6%
Entre 6 et 11 mois	17,8%
Entre 1 et 2 ans	23,9%
Entre 3 et 5 ans	20,9%
Entre 6 et 10 ans	12,2%
Entre 11 et 15 ans	6,1%
Plus de 15 ans	8,5%
Statut d'emploi	
Temps plein	55,6%
Temps partiel	35,2%
Sur appel	4,0%
À contrat	5,2%

Cette notation est utilisée pour maximiser la variance dans les réponses. Les trois items permettant de mesurer le leadership laisser-faire sont donc : « Tardé généralement à répondre à mes demandes » (item original), « Évite d'intervenir quand il y a des problèmes » et « Remet à plus tard la prise de décisions » (items ajoutés selon la définition).

La détresse psychologique. Cette étude utilise une version abrégée des travaux de Gilbert, Dagenais-Desmarais et Savoie (2011) qui elle-même est une version de l'échelle de mesure des manifestations de la détresse psychologique (ÉMMDP) de Massé et al. (1998b) adaptée au milieu de travail. Le modèle a de bons indices de cohérence interne avec des coefficients α entre .85 et .91 (Gilbert et al., 2011). Les analyses factorielles exploratoires de Gilbert et ses collaborateurs (2011) divisent la détresse psychologique au travail en trois dimensions : l'irritabilité/agressivité, l'anxiété/dépression et le désengagement au travail qui représentent respectivement le rapport envers l'entourage, envers soi et envers le travail. Parmi les 23 items originaux, les trois items avec les coefficients de saturation les plus forts (avec rotation Oblimin) pour chaque dimension ont été conservés, pour un total de neuf items. Des exemples d'items devant être évalués sur une échelle de cinq points allant de « Presque jamais » à « Presque toujours » sont : « Je suis facilement irritable, je réagis plutôt mal ou avec colère aux commentaires qu'on me fait » (dimension de l'irritabilité/agressivité), « Je me sens préoccupé, anxieux » (dimension de l'anxiété/dépression) et « J'ai envie de tout lâcher, de tout abandonner » (dimension du désengagement au travail).

La compatibilité avec les valeurs de l'organisation. La mesure de congruence de valeur subjective de Cable et DeRue (2002) contient trois items. La fiabilité de leur échelle est de $\alpha = .91$ dans leur échantillon comportant des données de 215 employés d'une seule entreprise et $\alpha = .92$ dans leur échantillon comportant 599 salariés provenant de plusieurs organisations. Cette étude comporte les mêmes trois items, mais adaptés en français : « Les choses que je valorise dans la vie sont très semblables aux choses qui sont valorisées par mon organisation », « Mes valeurs personnelles concordent avec les valeurs de mon organisation » et « Les valeurs de mon organisation correspondent aux choses que je valorise dans la vie ». La compatibilité avec les valeurs de l'organisation est évaluée sur une échelle en cinq points allant de « Pas du tout vrai » à « Tout à fait vrai ». Cette échelle a subi la back-translation de Brislin (1980), processus par lequel les items de la langue originale sont traduits par une personne dans la seconde langue, et retraduits par une autre personne dans la langue originale. La différence entre la version originale et la version retraduite est ensuite évaluée. Si les items conservent le même sens, ce qui est le cas avec la mesure en question, la version dans la seconde langue peut être considérée comme ayant un sens équivalent à la première version.

Résultats

Analyses préliminaires

Les moyennes, écarts-types, aplatissements, asymétries, coefficients de corrélations et alpha de Cronbach pour les trois variables à l'étude sont illustrés dans le Tableau 2. Les coefficients de

Tableau 2

Coefficients de cohérence interne, statistiques descriptives et corrélations pour les variables de leaders laisser-faire, détresse psychologique et congruence des valeurs

Variables	1	2	3
1. Leadership laisser-faire	(.73)		
2. Détresse psychologique	.22*	(.92)	
3. Congruence des valeurs	-.26*	-.36*	(.96)
<i>M</i>	2.20	1.86	3.19
<i>É.-T.</i>	0.94	0.78	1.18
Aplatissement	-0.39	1.41	-0.79
Asymétrie	0.74	1.24	-0.32

Note. * $p < .01$. Les données entre parenthèses représentent les coefficients de cohérence interne.

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cohérence interne sont au-dessus du seuil communément recommandé de .70 (Field, 2009), ce qui suggérerait donc qu'il y a une bonne homogénéité entre les items du questionnaire qui mesure chacune des variables. De plus, les données d'aplatissements et d'asymétries de chaque variable sont situées dans l'intervalle du seuil recommandé par Kline (1998), soit entre -3 et 3.

Vérification de l'effet modérateur de la congruence des valeurs sur le lien entre le leadership laisser-faire et la détresse psychologique

Afin de vérifier l'hypothèse voulant que l'existence d'un effet modérateur de la congruence des valeurs avec l'organisation permette de diminuer la relation négative entre un haut niveau de leadership laisser-faire et la détresse psychologique ressentie par les employés, une analyse de régression multiple de type hiérarchique a été effectuée.

Avant de procéder à l'analyse, la variable indépendante (le leadership laisser-faire) ainsi que la variable modératrice (la congruence des valeurs avec l'organisation) ont été converties en scores centrés au niveau de leurs moyennes afin d'éviter de potentiels problèmes de multicolinéarité (Aiken & West, 1991). Premièrement, des corrélations ont été faites entre les variables sociodémographiques et la variable dépendante. Seulement l'âge ($r = -.16, p < .01$) et la scolarité ($r = -.10, p < .05$) sont corrélées significativement avec la détresse. Ces variables ont donc été contrôlées dans les analyses (Bloc 1 du Tableau 3). Deuxièmement, la variable de la congruence des valeurs avec l'organisation ainsi que la variable du

niveau de leadership laisser-faire ont été intégrées simultanément dans le calcul de la régression afin de prédire le niveau de détresse psychologique ressentie par les employés (Bloc 2 du Tableau 3). Troisièmement, un terme d'interaction a été ajouté au calcul, créé par le produit de la variable indépendante et la variable modératrice (Bloc 3 du Tableau 3).

Les résultats obtenus avec le calcul de régression indiquent, de façon significative, qu'il existe un effet d'interaction entre le leadership laisser-faire et la congruence des valeurs avec l'organisation permettant de prédire la détresse psychologique. En effet, le modèle d'interaction explique à 18%, avec un b standardisé (β) de .12 ($R^2 = .18, p < .05$), la détresse psychologique ressentie chez les employés. Ceci peut être considéré comme un effet moyen (Cohen, 1988). Effectivement, il est possible d'observer que l'interaction entre le leadership laisser-faire et la congruence des valeurs avec l'organisation (Bloc 3 du Tableau 3) permet d'expliquer 1 % de plus que le modèle expliquant simplement l'addition des effets du leadership laisser-faire et de la congruence des valeurs (Bloc 2 du Tableau 3). De fait, la Figure 2, qui illustre l'effet d'interaction, montre que dans un contexte où les employés ressentent une forte congruence avec les valeurs de l'organisation, plus le patron démontre des comportements de type laisser-faire, plus les travailleurs seront à risque de ressentir de la détresse psychologique ($\beta = .26, p < .01$). Par contre, dans la situation où les salariés ressentent une faible congruence avec les valeurs de l'organisation, la relation entre le leadership de type laisser-faire et la détresse psychologique ressentie par les employés est non significative ($\beta = .05, p > .05$).

Tableau 3

Sommaire des résultats d'analyses par régression hiérarchique entre le leadership laisser-faire et la congruence des valeurs avec l'organisation

	<i>b</i>	<i>E.T. b</i>	β	R^2
Bloc 1				.03*
Âge	-0.10	0.03	-.15	
Scolarité	-0.04	0.02	-.08	
Bloc 2				.17*
Leadership laisser-faire (LLF)	0.12	0.04	.14	
Congruence des valeurs (CVO)		0.03	-.31	
Bloc 3				.18*
LLF * CVO	0.08	0.03	.12	

Note. * $p < .01$. Pour le Bloc 2, $\Delta R^2 = .14 (p < .05)$; $\Delta R^2 = .01 (p < .05)$ pour le Bloc 3. LLF = Leadership laisser-faire, CVO = Congruence des valeurs.

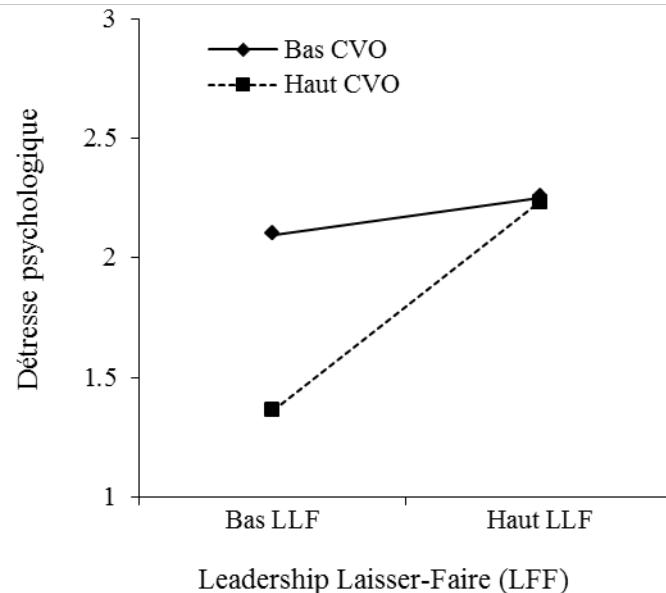


Figure 2. Relation entre le niveau de leadership laisser-faire et la détresse psychologique ressentie par les employés pour un bas ou un haut niveau de congruence des valeurs avec l'organisation.

Note. CVO = Congruence des valeurs.

Discussion

Cette étude cherchait à déterminer si la congruence des valeurs entre les employés et l'organisation est en mesure de modérer la relation entre le leadership laisser-faire et la détresse psychologique en atténuant ce lien. Les résultats suggèrent qu'il y a une interaction significative entre le leadership laisser-faire et la congruence des valeurs pour prédire la détresse psychologique. Donc, la congruence des valeurs modère effectivement le lien entre le leadership laisser-faire et la détresse psychologique. Toutefois, elle ne va pas dans le sens de l'hypothèse initiale de cette étude. En fait, les résultats suggèrent que de manière générale, et tel qu'attendu, les employés percevant que leurs valeurs sont congruentes avec celles de leur organisation tendent à vivre moins de détresse psychologique. Or, l'attente que le niveau de détresse psychologique des subordonnés percevant de la congruence de valeurs reste faible peu importe le niveau de leadership laisser-faire s'est avérée fausse. Plutôt, la détresse des employés ne percevant pas de congruence reste relativement élevée peu importe le niveau de leadership laisser-faire, alors que la détresse des employés percevant de la congruence fluctue avec le leadership laisser-faire. Par conséquent, la congruence des valeurs ne semble pas agir comme facteur de protection lors de la présence de leadership laisser-faire.

Les résultats vont donc en quelque sorte à l'encontre de ceux rapportés par Erdogan et ses collaborateurs (2004). Alors que ces derniers rapportent que la congruence des valeurs a un effet bénéfique sur la satisfaction lorsque la relation avec le superviseur est mauvaise, aucun effet protecteur de la congruence des valeurs contre la détresse psychologique en cas de leadership laisser-faire n'a été trouvé. Or, considérant le lien entre la satisfaction et l'absence d'effets négatifs (Bowling, Eschleman, & Wang, 2010), ceci serait l'effet comparable. En gardant en tête le fait que ces effets devraient être répliqués (et les différentes variables dépendantes formellement comparées), il apparaît, sur la base de ces deux résultats, que la congruence des valeurs interagit différemment avec ces deux types de leadership.

Considérant cela, une explication *a posteriori* des résultats peut être élaborée. Lorsqu'un employé a des valeurs congruentes avec l'organisation, il peut être identifié à celle-ci et donc, peut ressentir une souffrance psychologique par rapport au fait que son leader soit absent et ne soit pas actif dans le succès de son organisation. Ceci pourrait aussi expliquer pourquoi l'employé qui perçoit de la congruence de valeurs ressent moins de détresse psychologique avec un type de leader autre que le laisser-faire, puisque les autres types de leadership sont actifs. Toutefois, lorsqu'il n'y a pas de congruence des valeurs entre l'employé et l'organisation, que le supérieur soit de type laisser-faire ou non ne change pas le niveau de détresse de l'employé. En fait, si l'on suppose que les employés qui ne perçoivent pas de compatibilité entre leurs valeurs et celles de leur organisation ne peuvent se forger une identité sociale identifiée à leur système organisationnel qui leur permettrait de s'intégrer à leur environnement de travail, ceux-ci risquent probablement de ressentir de la détresse psychologique peu importe les comportements de leur superviseur. C'est ce qui est observé. Ceci pourrait expliquer pourquoi le leadership laisser-faire n'est pas corrélé avec la détresse psychologique dans un cas de faible congruence des valeurs.

Limites et pistes de recherche futures

La présente étude comporte certaines limites qu'il serait pertinent d'améliorer dans de futures recherches. Tout d'abord, l'échantillon n'est pas aléatoire; c'est plutôt un échantillon de convenance fait par l'entremise des contacts des chercheurs.

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L'idéal dans le futur serait de constituer un échantillon aléatoire afin d'avoir un échantillon plus hétérogène et représentatif de la population. En effet, les données sociodémographiques recueillies, par exemple l'âge et le sexe des répondants, pourraient être mieux distribuées. Cela dit, selon O'Reilly et ses collaborateurs (1991), une bonne congruence personne-organisation engendre des effets positifs indépendamment du genre, de l'âge ou de la fonction de l'individu. Puisque la congruence des valeurs est un aspect important de la congruence personne-organisation, cela limite les problèmes de généralisation. De plus, ceci est une étude corrélationnelle transversale. Lors de la réPLICATION de cette étude, il serait pertinent de faire une étude longitudinale afin de pouvoir affirmer des liens causals entre les variables, contrairement à cette étude qui peut seulement établir des corrélations. Par conséquent, il est impossible d'affirmer que le leadership laisser-faire cause la détresse psychologique, par exemple. Finalement, les données de cette étude furent seulement recueillies par questionnaires. Ceci peut créer un biais de la variance commune, car cette méthode unique a pu influencer la façon de répondre des participants. Il faudrait varier les sources d'information, par exemple, en rajoutant à la collecte de donnée une entrevue avec les participants ou en faisant remplir le questionnaire par les superviseurs aussi.

Cette étude a permis de trouver que la congruence des valeurs a un effet modérateur entre le leadership laisser-faire et la détresse psychologique. Il serait pertinent dans le futur de refaire le même schème de recherche, c'est-à-dire l'effet modérateur de la congruence des valeurs sur la détresse psychologique, mais avec d'autres styles de leadership. Dans la Figure 2, il est possible de voir que la détresse psychologique est plus basse avec une haute congruence des valeurs alors qu'il y a une faible présence de leadership laisser-faire. Donc, la présence d'autres styles de leadership influencerait la relation. En étudiant les autres types de leadership, cela permettra de mieux comprendre pourquoi la relation modératrice de la congruence des valeurs entre le leadership laisser-faire et la détresse a eu l'effet contraire que celui postulé au départ et permettra d'éclaircir les résultats obtenus.

Pistes d'intervention

La congruence des valeurs entre l'employé et l'organisation augmente la détresse chez le subordonné lorsque le leadership laisser-faire

augmente. Il ne serait pas logique pour une entreprise d'engager des gens n'ayant pas des valeurs communes avec leur organisation, car ils veulent des gens engagés dans leur travail et loyaux à l'entreprise. De plus, les résultats indiquent qu'un haut niveau de congruence des valeurs est lié à un bas niveau de détresse psychologique lorsqu'il y a un bas niveau de leadership laisser-faire. Donc, dans ce contexte, la seule possibilité pour régler le problème de détresse psychologique des employés est de ne pas avoir de leaders de type laisser-faire. En effet, il ne faudrait pas engager des patrons qui ont un style laisser-faire ou offrir des formations pour améliorer les gestionnaires déjà présents dans l'entreprise. Des dirigeants habilitants, qui confèrent beaucoup d'autonomie et de pouvoir décisionnel à leurs travailleurs (Byham, 1996; Lawler, 1986), ou des leaders transformationnels peuvent agir comme des facteurs protecteurs à la détresse psychologique des employés au travail et entraîneraient une plus grande productivité de leur part. Un dernier facteur à ne pas oublier est la problématique du suicide en milieu de travail. L'exemple de Postes Canada, ayant eu sept employés qui se sont enlevés la vie lors des deux dernières années et demie (Bellerose, 2013), n'est que l'exemple d'une entreprise où l'impact de la détresse psychologique peut avoir des conséquences désastreuses. Cette étude démontre qu'il est essentiel de favoriser la présence de bons leaders dans les entreprises afin de limiter la détresse éprouvée par les employés et permet de faire un pas de plus dans la lutte pour enrayer le suicide en contexte de travail.

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Hikikomori: The Need to Belong and the Activation of Narrative Collective-Assimilation through Visual Novels

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This paper explores the Hikikomori condition within the broader context of general social withdrawal. This condition is related to other social withdrawal disorders through a shared social withdrawal psychology which is characterized by an unfulfilled need to belong. However, the Hikikomori condition differs from these other disorders by its extreme symptom of social isolation which is manifested most notably in Japan where prominent factors of the social and cultural environment nurture and cultivate social withdrawal psychology to bring about the Hikikomori condition. This paper then examines the concept of narrative collective-assimilation and how its activation through the medium of visual novels creates a sense of belonging which may satiate Hikikomori individuals' need to belong. This research advances the general understanding of the burgeoning Hikikomori phenomenon and recognizes the potential of visual novels as a treatment not only for Hikikomori individuals but for other socially withdrawn individuals as well.

Keywords: Hikikomori, social withdrawal, belonging, narrative collective-assimilation, visual novels

Cet article explore le phénomène Hikikomori dans un contexte général de retrait social. Le phénomène Hikikomori rejoint les pathologies caractérisées par une psychologie et une symptomatologie de retrait social ainsi qu'un besoin insatisfait d'appartenance sociale. Celui-ci se démarque néanmoins en raison d'un isolement social marqué qui se développe lorsqu'un ensemble important de stresseurs environnementaux, présent à l'intérieur même de la société japonaise, favorise une psychologie de retrait social. Ensuite, cet article fait ressortir la notion de récit collectif d'assimilation et explore la possibilité que son activation, par l'intermédiaire de romans interactifs, créée chez les individus Hikikomori un sentiment d'appartenance qui leur permet d'assouvir ce besoin. Ainsi, cette étude vise à approfondir la compréhension de ce sujet grandissant ainsi que faire ressortir le potentiel rôle des romans interactifs par rapport au traitement du phénomène Hikikomori qui pourrait s'étendre à d'autres types de conditions caractérisées par un retrait social.

Mots-clés : Hikikomori, retrait social, appartenance, récit collectif d'assimilation, roman interactif

Hikikomori, the Japanese word meaning “withdrawal,” has come to signify in modern culture both the condition and the people who suffer from acute social withdrawal (Saito, 1998). Hikikomori individuals remove themselves from society by shutting themselves in their rooms, venturing outside very rarely or not at all (Teo, 2009). Their social isolation results in unproductive lifestyles and minimal social contribution, which becomes a great burden on their supporting families as well as the rest

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of society. Though not yet defined as a unique disorder by the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000), Hikikomori is well recognized by the Japanese Ministry of Health, Labour and Welfare as a significant phenomenon affecting Japanese society. Reports estimate as many as 700,000 Hikikomori sufferers within the country, a number that may in fact be a conservative estimate due to the hidden nature of the condition (Kremer & Hammond, 2013). Although the majority of cases have been reported in Japan, Hikikomori's symptoms do extend outside the country and are beginning to receive attention in countries such as Korea, Oman, and Spain (Kato et al., 2012). In light of the growing significance of the Hikikomori phenomenon, this paper sets out, first, to explore

how Hikikomori fits within the context of general social withdrawal – one's isolation from a peer group (Rubin, Coplan, & Bowker, 2009) – by examining how Hikikomori relates to and differs from other social withdrawal disorders. This paper then studies the concept of narrative collective-assimilation and how its activation through the medium of visual novels creates a powerful need to belong. By studying these topics, this paper illustrates how Hikikomori may satiate their need for belonging despite their characteristic isolation. This paper also formulates the use of visual novels as a possible social reentry treatment not only for Hikikomori but also for other socially withdrawn individuals.

Hikikomori is the self-imposed condition of extreme social and physical isolation. The Japanese Ministry of Health, Labour and Welfare (2003) defines Hikikomori by the following five criteria: home-centered lifestyle, aversion to school or work, absence of other mental disorders such as schizophrenia, no interpersonal relationships, and social isolation lasting six months or longer. Hikikomori is the removal of all social aspects from one's life (social activities such as school and work and interpersonal relationships with friends, significant others, and family); it is the adoption of isolation within the confines of one's room.

The *Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM-IV TR)* (APA, 2000) lists two general characteristics of social withdrawal disorders. Firstly, social withdrawal disorders are distinguished by social avoidance. For example, people with social phobia strongly avoid interpersonal contact. This behavior may significantly interfere with their daily lifestyle; however, only in extreme circumstances will this social avoidance lead to social and physical isolation and cause a complete discontinuation of daily activities. In addition, social withdrawal disorders are distinguished by one's desire for acceptance and familiar bond. Though agoraphobics, for example, are anxious of situations such as crowded areas or open spaces, they can endure such stress when accompanied by a familiar companion (APA, 2000).

An examination of these formal definitions highlights an important similarity between Hikikomori and general social withdrawal – the shared symptom of social withdrawal, an avoidance of people and social interaction. Hikikomori fulfills a major criterion

of social withdrawal disorder and fits among these other conditions (Rubin et al., 2009). At the same time however, Hikikomori stands out strikingly from other social withdrawal disorders due to the severity of its withdrawal symptoms. Though social isolation is considered standard for Hikikomori (Ministry of Health, Labour and Welfare, 2003), such a symptom is considered extreme for other social withdrawal disorders and only appears in severe circumstances (APA, 2000).

Taking this information into account, this article now analyzes the similarities between Hikikomori and other social withdrawal disorders in order to uncover their shared social withdrawal psychology – the cognition, motivation, and general mental state underlying the symptoms of social withdrawal. This article then investigates the particularities surrounding Hikikomori in order to understand its unique symptomatic manifestation of social withdrawal psychology.

The Unfulfilled Need for Belonging and the Origin of Hikikomori

The classification of Hikikomori alongside other social withdrawal disorders suggests that they may share a common psychological cause. Examining the background shared by Hikikomori and other socially withdrawn individuals, one notes common histories of insecure parent-child relationships. Though type and degree of insecurity may vary, such insecure parental attachments are thought to stunt a child's social development – the development of social navigation skills – and so make his or her future social interactions incredibly difficult (Hastings, Nuselovici, Rubin, & Cheah, 2010; Krieg & Dickie, 2011).

The insecure parent-child relationships of Hikikomori are characterized by a deficiency in parental involvement; few parent-child interactions (Hattori, 2006) and hardly any emotional connection (Suwa, Suzuki, Hara, Watanabe, & Takahashi, 2003). A recovering Hikikomori recalled in one interview how, upon confiding in his parents about being bullied in school, his parents told him coldly to "handle it himself" (Jones, 2006). Such parent-child relationships lacking in parental involvement fail to socially prepare the child and result in an underdevelopment of the Hikikomori's capacity for social interaction, exploration, and navigation (Krieg & Dickie, 2011). Insecure parent-child relationships

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in Hikikomori backgrounds thus fail to introduce sufficient early social experience and therefore stunt the child's social development.

Insecure parental attachments are similarly reported in non-Hikikomori social withdrawal cases. However, instead of parental under-management (a lack of interaction), these insecure parent-child relationships are characterized by over-management: parents over-control and over-protect their children and in turn create a monopoly on their child's interpersonal relationships (Erickson, Sroufe, & Egeland, 1985; Rubin, Hastings, Stewart, Henderson, & Chen, 1997). Insecure parental attachment characterized by over-management of children's actions restrict their interpersonal development and social exploration (Hastings et al., 2010) and thus, as in Hikikomori cases, stunt children's social development.

Bullying is another commonly reported occurrence in socially withdrawn individuals' backgrounds. Hikikomori youth often suffer verbal and physical abuse from their peers and are excluded from social groups (Teo, 2009). Other socially withdrawn individuals report similar instances of victimization: negative judgment, peer exclusion, and lack of social acceptance (Oh et al., 2008). Such patterns of bullying reflect a history of rejection and difficult social experiences.

Now, by studying the social patterns common to Hikikomori's and other socially withdrawn individuals' backgrounds, a singular theme arises: an adverse social environment. Insecure parent-child relationships leave the youth clumsy and unskilled in social interactions while bullying causes children to become social victims. Socially withdrawn individuals face intimidating social environments in which they are made to believe that they do not belong. Examining the background of socially withdrawn individuals, one can understand that these individuals withdraw from social environments that are aversive, where they feel that they do not belong. For example, one study recorded how anxious solitary youth display social avoidance when threatened by high peer exclusion, illustrating how socially withdrawn individuals may withdraw from situations in which they are rejected and denied social acceptance (Gazelle & Rudolph, 2004). Such social withdrawal behavior in response to situations that reject them points to socially withdrawn individuals' aversion to

social rejection. Indeed, Hikikomori have been documented in various interviews to express great fear of negative critique, judgment, and social failure, which consequently highlights a powerful fear of rejection (Ogino, 2004). Socially withdrawn individuals thus withdraw because of their fear of adverse social environments which are rife with the possibility of rejection (Krieg & Dickie, 2011), challenging their sense of belonging.

Consequently, social withdrawal and a fear of rejection reflects an individual's need to belong. An individual needing to belong is sensitive to rejection and so moves away from hostile situations which may threaten his or her need to belong (Leary, Tambor, Terdal, & Downs, 1995). Socially withdrawn individuals, avoidant persons, and people with social phobia, for example, are hypersensitive to rejection because of their great need for belonging and consequently withdraw in order to avoid rejection (APA, 2000). Thus, social withdrawal psychology stems from an unsatisfied need to belong; the *DSM-IV TR* notes how socially withdrawn individuals, despite their withdrawn situation, still desire acceptance and need to belong (APA, 2000). As Maslow (1943) describes in his motivational hierarchy, love and belonging are basic human needs; all people, withdrawn individuals included, desire human relations and need a place within the social world. Therefore, when met with an adverse social environment, the powerful need to belong conflicts with the negative experiences of rejection, and as a consequence the socially withdrawn individual withdraws. Social withdrawal psychology thus is characterized by an individual's unfulfilled need to belong, symptomatically manifested as social withdrawal in order to reduce experiences of rejection in an adverse social environment (APA, 2000). Consequently Hikikomori fits well within the context of general social withdrawal (APA, 2000; Rubin et al., 2009). Hikikomori and other social withdrawal disorders share not only the same general withdrawal symptoms but also the same social withdrawal psychology.

Despite this shared psychology, Hikikomori's extreme symptom of acute social isolation markedly distinguishes Hikikomori from other social withdrawal disorders. This difference in severity of symptoms between disorders raises the following question: what causes social withdrawal psychology to manifest as Hikikomori, to express itself as extreme social

isolation? Though not a culturally specific disorder, Japan has a high amount of reports and studies about Hikikomori (Kato et al., 2012), and hence the unique set of characteristics prominently found in Japan's social and cultural setting may hold answers concerning the extreme social isolation of Hikikomori. These features of Japan's culture and society – mainstream expectations for individual success, a mindset of retreat, and behavior enabling social withdrawal – may encourage social withdrawal psychology to express itself as symptoms of Hikikomori and consequently create in Japan an environment especially conducive to Hikikomori manifestation.

Mainstream expectations of Japanese culture and society place immense pressure on Japanese youth by outlining rigorous definitions of success in education and employment. In order to achieve educational success for example, a youth must follow a designated, structured path – primary school, junior high school, high school, and then university (Fujita, 2007). This progression towards university graduation marks the accepted pathway to employment and so holds not just great cultural gravity but social significance too. A youth's educational success is thus determined by how closely he or she adheres to this traditional educational path; and this strict definition of success in turn creates great pressure on young people to fulfill these social expectations.

The Japanese employment system likewise generates great social pressure on the country's youth through its long-term employment system, recently reinforced by asymmetric labor market changes (Kosugi & Hori, 2003; Norasakkunkit & Uchida, 2011). The long-term employment system creates an incredibly stressful situation of one-shot recruitment in which youth must find employment immediately after university or else they will have great difficulty entering the workforce later on (Norasakkunkit & Uchida, 2011). This long-term employment system thus burdens the youth with great expectations and practically only one chance to fulfill them – which creates stress about their present and future. Exemplified by the Japanese education and employment system, mainstream expectations burden the youth with great pressures to conform not only in the present but also in the future, and not just to their peers but also to society at large. Strict requirements for achieving cultural and social acceptance create a seemingly inescapable adverse social environment for

socially withdrawn individuals. These expectations expand the threat of rejection from the local environment of the family and friends to society at large, encouraging in socially withdrawn individuals a powerful fear of the future and society.

The mindset of retreat is the Japanese cultural ideology of preserving social harmony by retreating rather than rising when one's self and society are in conflict. In this mindset, society takes precedence over the individual, and this is generally reflected in Japanese individuals' interdependent self-construal, where one recognizes oneself in relationship with others and mostly as part of society at large (Markus & Kitayama, 1991). This mindset thus promotes withdrawal by establishing it to be culturally appropriate and favorable to retreat from social conflicts such as social rejection (Lebra, 1984). An anecdotal interview with a Hikikomori demonstrates the importance of preserving social harmony even from a young age: the Hikikomori's parents told their child, "You must have reasons to be blamed... Stay away from them, and they will not harm you" (Hattori, 2006). The mindset of retreat thus promotes and advocates social withdrawal as the appropriate solution to social conflict; this cultural ideology of retreat furthermore foments social isolation, for if one is at conflict with greater society, the viable solution then would be to withdraw from society itself – to socially isolate oneself.

The enabling behaviors of *futoko* and *amae* also encourage the onset and continuation of Hikikomori. *Futoko*, which means "school refusal" in Japanese, is the refusal to attend school for a short period of time and it is common across Hikikomori's backgrounds (Saitō, 2002). It functions as a test trial for future Hikikomori by allowing an individual to temporarily experience dropping out from school and self-isolating. *Futoko* makes the individual aware of the possibility of refusing his social duties and introduces him or her to the concept and experience of school and social withdrawal – thus seeding the first stirrings of Hikikomori. *Amae* – the parental tolerance of a child's dependency – promotes not only the onset, but also the continuation, of Hikikomori (Doi, 1973). Common across Hikikomori backgrounds, *amae* behavior foments a child's dependency on a parent by allowing the child to expect to be supported financially (Doi, 1973). Such behavior facilitates both the onset and continuation of Hikikomori by allowing an individual to expect parental indulgence throughout

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isolation while the parents tolerate his or her behavior. For example, though many Hikikomori possess no source of income, parents yielding to *amae* behavior facilitates their child's continued isolation by providing financial support, housing, and food. (Jones, 2006). Enabling behaviors such as *futoko* and *amae* thus encourage Hikikomori by promoting its beginning and nurturing its continuation.

In summary, a unique set of characteristics of the Japanese environment encourages social withdrawal psychology to manifest as Hikikomori. An individual's need to belong, his or her fear of rejection, conflicts with the great and pervasive social adversity created by mainstream expectations. Withdrawal is not only encouraged by a cultural mindset of retreat but is also facilitated to degenerate into isolation through the enabling behaviors of *futoko* and *amae*. These various environmental characteristics nurture social withdrawal psychology to symptomatically manifest as Hikikomori; and in turn, the prominence of these characteristics create within Japan an environment conducive to Hikikomori's manifestation.

Now, as social withdrawal manifests as Hikikomori what then of the motivation underlying the symptoms, the unfulfilled need to belong? The need remains unfulfilled, strong and persistent. Socially withdrawn individuals, though withdrawn from social situations, still desire acceptance and need to belong (APA, 2000). After all, the persistence of the symptoms reflects an awareness of the unfulfilled need to belong. One can find support for this in a study demonstrating that dismissive-avoidant individuals, despite being adverse to forming or maintaining social relationships, reacted affirmatively to positive social feedback by expressing high positive affect and self-esteem upon social inclusion; despite their apparent aversion to social interaction, these individuals still do need to belong (Cavallo & Gabriel, 2006). Therefore in spite of their withdrawn, isolated state, Hikikomori continue to feel the need to belong and their social withdrawal psychology persists. How then could Hikikomori satiate their unfulfilled need to belong in spite of their isolation?

The answer may lie in a narrative experienced through the medium of visual novels. To investigate this theory and to identify how visual novels may satiate Hikikomori's need for belonging, the following conceptual and material groundwork must first be

established: the concept of narrative collective-assimilation, its function, and its activating components, as well as a definition of visual novel and an explanation of the medium. Lastly, this article explores how various aspects of visual novels facilitate narrative collective-assimilation and so provide Hikikomori with a sense of belonging.

Narrative Collective-Assimilation

Narrative collective-assimilation is the process in which the experience of a narrative causes one to psychologically assimilate into the narrative's group and consequently gain a sense of belonging. Narrative collective-assimilation can thus be broken down into two processes: assimilation into a narrative's collective and increase the sense of belonging.

Narrative collective-assimilation (NCA) first states that when one experiences a narrative, one assimilates into a collective, a social group presented in that narrative (Gabriel & Young, 2011). One study, for example, showed that participants who read *Harry Potter* identified more as wizards while those who read *Twilight* identified more as vampires, illustrating how participants assimilate into the collective which was presented in the narrative they experienced (Gabriel & Young, 2011).

Narrative collective-assimilation secondly states that through assimilation into a narrative's collective, one gains a sense of belonging (Gabriel & Young, 2011). Gabriel and Young (2011) support this finding through their *Harry Potter/Twilight* study in which participants who sought more strongly to fulfill their need to belong through participation in a real-life collective also showed higher assimilation into a narrative's collective. In other words, engagement in a real-life collective predicts assimilation into a narrative's collective, suggesting that NCA can satisfy one's sense of belonging similarly to an actual collective. Gabriel and Young's (2011) study also reports how, in response to NCA, participants demonstrate an increase in positive mood and life satisfaction, primary affective responses to belonging, further demonstrating NCA's ability to create a feeling of belonging in narrative-consumers. Additionally, a study on familiar television narratives illustrates how narrative collective-assimilation provides the narrative-consumer with a sense of belonging through its promotion of social surrogacy, a socially rewarding one-sided interpersonal interaction

(Derrick, 2013; Derrick, Gabriel, & Hugenberg, 2008).

Thus, narrative collective-assimilation takes place when an individual experiences a narrative and the person assimilates into one of the narrative's collectives, feeling part of one of the story's social groups; the effects of this assimilation are powerful, similar to those derived from assimilation into a real-life collective, and the assimilated individual gains a satiated sense of belonging.

There are three components which activate narrative collective-assimilation: a collective, identification with characters, and transportation. The first component of NCA is a collective, a social group within the narrative which one can assimilate into. Wizards, a social group prominently featured in *Harry Potter*, are an example of such a collective. A narrative must feature a collective in order to activate NCA, because without a collective, there can be no assimilation at all.

The second component of NCA is identification – the process of psychological overlap between the narrative-consumer's self and a character's self, such that they unify (Sestir & Green, 2010) and the consumer begins to vicariously live through the character, reacting to his or her experiences on a personal and affective level (Noy, 1993; Rosengren & Windahl, 1972). Thus, as identification allows a narrative-consumer to gain a character's perspective and participate in the narrative's collective, it is a powerful activator of narrative collective-assimilation. For example, in Gabriel's and Young's (2011) study, participants who identified themselves as wizards assimilated into *Harry Potter*'s wizard collective whereas those identifying as vampires assimilated into *Twilight*'s vampire collective.

NCA's third component is transportation – the process by which a media-consumer becomes emotionally and cognitively immersed into the setting of a narrative (Chatham, Green, & Sestir, 2010; Green & Brock, 2000). When one becomes transported, one's reactions to in-narrative changes firstly become less negative; additionally these reactions become more affective than cognitive. As such, the narrative's environment, the characters, and the plot feel more real and have a larger impact on the transported individual (Escalas, 2007). By immersing the

consumer deeper into the narrative and collective and by adding a layer of realism, transportation creates powerful connections between the consumer and the characters of the story's collective (Green, 2006; Green & Brock, 2000) and thus facilitates the activation of narrative collective-assimilation.

These three components – a collective, identification with characters, and transportation – facilitate assimilation into a collective and subsequently the increase in sense of belonging. Consequently, if a narrative promotes these components, it will robustly activate narrative collective-assimilation and instill within the narrative-consumer a strong sense of belonging. Such a narrative may take form in the medium of visual novels. Visual novels' unique characteristics powerfully activate NCA by promoting its key components, and in turn visual novels provide Hikikomori the comfort of belonging despite isolation.

Visual Novels

Visual novels are a digital narrative-based medium featuring interactive decision-making gameplay – much like that of choose-your-own-adventure books – which allows the player to decide how the visual novel progresses and eventually how the visual novel will end. Visual novels' stories vary with the choices the player makes in each playthrough and so each story holds a unique plot and multiple possible endings. The stories of visual novels are communicated mostly via textual narration and dialogue and are complemented by audio and digital imagery. A player simultaneously plays and reads through the story by clicking, each click progressing the narrative one step forward. One click, for example, might display a character's next line of dialogue and another click might trigger a new character's entrance. One could thus understand a visual novel as an interactive power-point presentation, but instead of a lecture or speech, the presentation communicates a narrative through visuals which show settings and characters, text which displays dialogue and narration, and audio which provides music and sound effects. Additionally, there are multiple possible paths that the narrative can take based on the player's choices.

Before studying how visual novels' characteristics may activate narrative collective-assimilation's components and consequently provide a sense of belonging to Hikikomori, one must first understand

why this paper theorizes that the medium of visual novels could deliver a sense of belonging to Hikikomori.

Previous research has shown that socially withdrawn individuals find in media a source of belonging. For example, a study on nomophobia – the anxiety produced through the non-availability of a virtual communication device – reveals that participants with social phobia display symptoms of nomophobia not because of their dependence to the devices themselves, but rather to their dependence on the safe and mediated social interaction offered by the devices (King et al., 2013). In the same way that people with social phobia are likely to depend on communication devices for safe social interaction, Hikikomori too may rely on a medium to substitute for social relationships. That medium then could be visual novels due to their wild popularity in Japan: visual novels made up nearly 70% of all PC games sales in 2006, hefty sales in themselves (Aoshi, 2006). Their wide accessibility and popularity may therefore grant them the high probability of reaching and affecting Hikikomori, production of a feeling of belonging.

Satiating the Need to Belong: Visual Novels and the Activation of Narrative Collective-Assimilation

Visual novels' individual characteristics – minimal mechanics, auditory environment, static graphics, first -person point of view, and interactive decision-making gameplay – facilitate narrative collective-assimilation by activating its key components: a collective, identification with characters, and transportation into a collective. By facilitating these individual components, visual novels activate narrative collective -assimilation and so create in Hikikomori a sense of belonging.

Minimal mechanics. Due to visual novels' minimal mechanics – text and still images with only clicking controls – a visual novel's narrative is restricted almost solely to character interaction (Barnholt, 2009). The medium allows for little to no action so the story must be told through interpersonal interaction. Visual novels inherently feature a pervasive collective within their narratives which centers gameplay around the consumer's strong participation within that collective.

Auditory environment. Visual novels promote identification with characters through the employment of an auditory environment composed of music and sound effects. Music aptly communicates emotion through its tonal structures which construct an analogy of human feelings (Noy, 1993). A visual novel's music therefore communicates to the player a character's mood and feelings, helping the player to emotionally connect and identify with that character. Similarly, sound effects such as the creak of a door or the rush of a sudden breeze foster identification with characters by providing auditory insight into a character's real time experiences. By allowing the player and the character to hear the same thing at the same time, a visual novel permits a player to gain a character's auditory perspective, bridging the physical distance between player and character and so cultivating bodily identification.

A visual novels' auditory environment also facilitates transportation. As music communicates emotion (Noy, 1993), it thus can communicate the mood of a narrative's setting. This in turn helps the player understand the narrative's setting at an affective level and transports him or her into the emotional environment of the visual novel. In addition, sound effects allow a player to gain an auditory sense of the narrative's physical world by relaying real-time narrative events through sound. The player experiences and hears a visual novel's environment and thus promote transportation into the narrative. In summary, by using sound to communicate mood and real-time information about the narrative's characters and settings, a visual novel's auditory environment promotes the player's identification with characters and transportation.

Static graphics. Static graphics perform the narrative's visual storytelling, depicting characters and settings. By visually communicating the narrative's setting, static graphics facilitate the player's transportation. For example, a literature review on videogame narratives particularly notes how a game's visuals strongly affect a player and thus promote transportation (Lu, Baranowski, Thompson, & Buday, 2012). By visually depicting characters and settings through still images, a visual novel gives the player a visual summary of the narrative's environment, a snapshot which allows him or her to react affectively to the narrative's world. Also, by remaining unchanging, static graphics allow the player to focus on a single scene and become visually familiar and

immersed into the narrative's setting. By prompting affective responses to a narrative's world and by allowing the player to become familiar with the setting, visual novels' static graphics promote one's transportation into the narrative's world.

1st person point-of-view. Visual novels implement a 1st person point-of-view which allows the player to experience the narrative from the protagonist's perspective. Game characters, for example, appear on the screen looking out towards the player and create the illusion of 1st person interaction and face-to-face conversation. By gaining the protagonist's visual perspective, the player consequently becomes physically similar to the character, physically identifying as the protagonist through a shared sight. Additionally, 1st person point-of-view allows the player to identify with the protagonist at an emotional level. For example, in a study comparing participants' perceptions of 1st person narratives versus 3rd person narratives, participants reported that they connected more affectively and emotionally with the protagonist when they read the story through a 1st person point-of-view rather than through a 3rd person point-of-view (Banerjee & Greene, 2012). A 1st person point-of-view therefore motivates a player to gain not only the protagonist's physical perspective but also the protagonist's emotional perspective, consequently fostering a player's robust identification.

Interactive decision-making. Visual novels' interactive decision-making gameplay allows the player to make choices for and as the protagonist during certain plot points within the narrative. This interactive decision-making gameplay places the player right in the character's shoes and allows the player's and the character's selves to become one, fomenting the player's physical identification with the protagonist. Additionally, decision-making gameplay allows the player to choose the protagonist's dialogue during conversations with other characters. Such interactive gameplay heightens the simulation of a player's participation in social interaction and interpersonal relationships which in turn stimulates the player's social identification with the protagonist.

Decision-making gameplay furthermore promotes identification with characters through its creation of a variety of playable endings crafted from a player's choices throughout the storyline. These varying endings can be subjectively good or bad: a bad ending in the visual novel *School Days* results in the death of

one of the protagonist's love interests. One might intuitively believe that such bad endings would counteract narrative collective-assimilation by lessening the player's desire to identify with the protagonist or by destroying the sense of a collective. However, reactions to events become affectively less negative and more positive when experienced through the lens of narrative. That is, narratives buffer against negative emotions (Escalas, 2004). In addition, bad endings in visual novels may in fact foment narrative collective-assimilation by facilitating strong identification. Indeed, the experience of bad endings firstly promotes identification with the protagonist by allowing the player to connect with him or her not just through positive experiences but also through negative ones (Jagoda, 2013). Hence, bad endings act as another dimension by which the player can understand and become familiar with the protagonist; creating a more in-depth and complex connection between player and protagonist, bad endings of visual novels strengthen a player's identification with the protagonist.

Bad endings can also increase identification with the protagonist by encouraging replay. Upon experiencing a bad ending, a player may feel the desire to erase the negative feelings of "losing" by replaying the game from the beginning or a save point in order to "win" and reach a good ending. Replaying the game allows the player to spend more time with the protagonist and introduces new experiences with the character via the exploration of different narrative pathways, scenes, and settings. Through additional time spent with the character, bad endings create a closer connection between the player and the protagonist and thus strengthen identification with the main character. Visual novels' interactive decision-making gameplay therefore facilitates identification with the protagonist by the bond cultivated through choice and by the experience gained from bad endings.

Visual novels are clearly a medium featuring prominent and strong collectives and highly conducive to activating one's identification with the story's characters and transportation into the novel's narrative. Visual novels therefore are especially powerful activators of narrative collective-assimilation and grant players a strong sense of belonging. In light of their popularity in Japan and of the relationship of socially withdrawn individuals with media, visual novels may thus answer how Hikikomori could satiate their need for belonging in spite of their isolation.

Discussion

Prominently reported in Japan, Hikikomori is a social withdrawal condition characterized by its extreme symptom of acute social isolation lasting more than six months. An examination of Hikikomori's and other socially withdrawn individuals' shared backgrounds – insecure parent-child relationships and bullying – reveals how Hikikomori fits within the classification of social withdrawal. These disorders all share the same underlying social withdrawal psychology: the unfulfilled need to belong. Faced with an adverse social environment, Hikikomori and other socially withdrawn individuals withdraw because of their fear of rejection and powerful need to belong.

Hikikomori stands out from other social withdrawal conditions for its extreme symptom of social isolation. In fact, an investigation of Japan's social and cultural environment illustrates how Hikikomori manifests itself when social withdrawal psychology is cultivated by a particular set of characteristics – expectations of success, a mindset of retreat and withdrawal enabling behavior – prominent within the Japanese setting. These characteristics encourage social withdrawal psychology's symptomatic expression as Hikikomori and create in Japan an environment especially conducive to its manifestation.

Realizing that Hikikomori maintain the need to belong during isolation, an exploration of the concept of narrative collective-assimilation and the medium of visual novels demonstrates how Hikikomori may satiate their need for belonging despite their isolation. Narrative collective-assimilation states that when an individual experiences a narrative and assimilates it into one of the narrative's presented collectives, the individual gains a sense of belonging. Visual novels in turn induce powerful narrative collective-assimilation due to their unique set of characteristics – auditory environment, static graphics, first-person perspective, and decision-making game play – which promotes the key activating components of NCA (a collective, identification with characters, and transportation). Thus, visual novels, through robust activation of narrative collective-assimilation, create in their players a strong sense of belonging. Moreover, due to socially withdrawn individuals' dependency on media and the popularity of visual novels in Japan, visual novels provide the medium for narratives by which Hikikomori may satiate their need for belonging.

Potential Treatment for Social Withdrawal

Up until now, this article has discussed visual novels as a method by which Hikikomori may find a sense of belonging while remaining in isolation. One may thus perceive visual novels as medium which encourages Hikikomori to persist in their isolation by granting players a one-sided experience of social belonging. Indeed, perhaps the purely recreational visual novels made for the mainstream market do in fact aggravate and promote Hikikomori's further isolation; the aspects of this possibly negative phenomenon will be discussed in greater detail later in the *Limitations* section. However, this article presents the concept of treatment-oriented visual novels, visual novels are specifically crafted to foster social preparation and social reintegration in Hikikomori through recreational gameplay.

Firstly, during the early stages of treatment, visual novels could prove to be more effective than human effort in engaging the individuals in treatment because while Hikikomori are averse to social interaction and may resist attempts of human contact, they may accept visual novels due to their safe mediation and creation of a sense of belonging. Hikikomori may thus reach out to and interact with visual novels without resistance. And in this way, visual novels may act as a viable method for initiating Hikikomori's treatment of social reentry.

To understand how visual novels may initiate a Hikikomori's social reentry, one must first recognize that visual novels are a gamification of social interaction and therefore a tool for social preparation. Gamification is the employment of a game structure on a non-game activity in order to improve one's engagement and problem solving skills within this non-game context (Jagoda, 2013). This means organizing an activity around the positive aspects of winning, the negative aspects of losing, and the beautiful aspects of art of games. Visual novels' gameplay rewards well navigated interpersonal interactions with good endings, punishes poorly navigated relationships with bad endings, and artistically expresses social experience through music, imagery, and narrative. The medium of visual novels thus functions as a gamification of social interaction, and engages Hikikomori players in mediated social interaction, teaching them social problem-solving skills and acting as a powerful tool for social preparation.

By socially preparing Hikikomori, visual novels may in turn facilitate a transition between virtual and human-based treatment. This general theory follows that of “rental sisters” used by New Start, a Hikikomori rehabilitation program in Japan. New Start initiates treatment of Hikikomori with “rental sisters,” girls whose purpose is to begin the Hikikomori’s reentry into society by establishing first contact with the Hikikomori and giving him or her a positive first impression of social interaction (Jones, 2006). Though aimed to establish first contact with Hikikomori, many “rental sisters” have trouble with even this initial task due to the Hikikomori’s intense aversion to human interaction (Jones, 2006). In such cases, visual novels could prove incredibly useful, first initiating contact with Hikikomori without resistance and then establishing first human interaction with greater ease by gradually transferring the treatment into a rental sister’s hands. Visual novels specifically tailored for treatment could function as mediated versions of rental sisters, establishing first connections with the outside world and introducing positive social interaction to the Hikikomori through narrative and game characters. Visual novels would then progressively connect the digital world to the real one using alternate reality game (ARG) mechanics (gameplay which carefully and gradually requires more of the player’s social involvement), transforming mediated social interaction into real social interaction and thus facilitating Hikikomori’s reentrance to society.

Limitations

One limitation with the idea of using visual novels as treatment for Hikikomori is that even though visual novels may provide socially withdrawn individuals with a sense of belonging and engage them in mediated social interactions, visual novels by themselves do not function as complete treatments of social withdrawal. The safety of their mediated social interaction and the satiation provided by their sense of belonging may, in fact, encourage one to remain within the comfort zone of isolation rather than move into society. And so, though useful for reaching out to and impacting Hikikomori, visual novels’ creation of a satiating sense of belonging may inadvertently encourage further isolation, as satiated individuals will no longer feel a need to engage in real interpersonal interaction and instead remain isolated. By crafting visual novels for the specific purpose of social reentry treatment however, inadvertent encouragement of

isolation can be counteracted through careful application of alternate reality game mechanics. ARG mechanics promote a player’s engagement with the social world by extending gameplay into real world settings with real world people (Kim, Lee, Thomas, & Dombrowski, 2009), shifting the source of belonging into a social setting and so encouraging Hikikomori’s social reentry. Thus, though visual novels on their own may not be sufficient or beneficial for fostering social reintegration, when accompanied by close cooperation of human factors and transitional mechanics which extend digital gameplay into the real world, visual novels may function as effective treatments for social withdrawal.

Another limitation with this research is that it seems relevant only to the specific niche of Hikikomori. Yet, though Hikikomori stands out for its extreme symptoms of acute social isolation, it is still a social withdrawal disorder and relates to other disorders through their shared social withdrawal psychology. For this reason, visual novel treatment is far from being solely useful for Hikikomori and may be used to treat various other socially withdrawn individuals such as avoidant persons or people with social phobia.

Visual novels present a new possible treatment method for Hikikomori through their ability to facilitate social reentry; visual novels establish first contact with Hikikomori without resistance, socially prepare the individuals, and then transition them into further treatment involving human interaction. Since Hikikomori is comparable to other social withdrawal conditions through their shared underlying psychology, such visual novel treatment may present a novel technique of treatment for social withdrawal.

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Biracial Ancestry and Socioeconomic Status in Acculturation Perception

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This study examines the impact of socioeconomic status (SES) and biracial White ancestry on perceptions of acculturation or “being American,” and the racial categorization of Asian American, African American and Latino American targets. Participants ($N = 289$) read a brief excerpt of a college admissions essay from an applicant in one of the three ethnic groups, and then answered questions about their impressions of the applicant. In general, results suggest that applicants of biracial ancestry (half white/half minority) were perceived to be more acculturated than those of monoracial minority ancestry. Surprisingly, SES was associated with greater perceptions of acculturation for Latino Americans only. Thus, both SES and biracial ancestry independently influence perception. Moreover, perceptions of acculturation and White categorization are correlated for Asian American and Latino American targets, but not African Americans. Findings are discussed in terms of the primacy of culture in impression formation of non-African American ethnic groups.

Keywords: ethnicity, biracial identity, acculturation, person perception, racial categorization

Cet article étudie l’effet du statut socioéconomique (SSE) et de l’ascendance mixte sur les perceptions de l’acculturation et la catégorisation raciale de sujets Américains d’origine asiatique, africaine et latine. Les participants ($N = 289$) avaient à lire un extrait provenant d’une lettre d’admission universitaire appartenant à un des candidats de l’un des trois groupes ethniques. Ils devaient ensuite indiquer leurs impressions du candidat. Les résultats suggèrent que les candidats d’ascendance mixte furent perçus comme étant plus acculturés que ceux d’origine ethnique minoritaire. Le SSE fut associé à une perception d’une acculturation supérieure uniquement chez les individus d’origine latine. Ainsi, le SSE et l’ascendance influencent indépendamment la perception. La perception de l’acculturation et la catégorisation sont corrélées significativement avec les candidats d’origine asiatique et latine, mais non africaine. Les résultats seront discutés dans un contexte de l’importance culturelle dans la formation d’impressions par rapport aux groupes ethniques d’origine non africaine.

Mots-clés : ethnicité, identité mixte, acculturation, perception, catégorisation raciale

Over the past decade, the United States has experienced substantial growth in the multiracial population, that is, in individuals possessing at least two racial heritages. The multiracial population grew from six million to nine million in 2010, according to the U.S Census. This population increased 32% between 2000 and 2010, and surpassed the growth rate of every other racial category (Humes, Jones, & Ramirez, 2011). Even though the multiracial

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population clearly exhibits continuous growth, psychological research on multiracial individuals is a severely understudied domain (Shih & Sanchez, 2009). Only recently, has this demographic shift been studied with the purpose of understanding the minority experience. Moreover, the growing racial heterogeneity of the population challenges the ease to which acculturation is perceived (Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Acculturation is a cultural change in behavior that occurs when a group of individuals possessing a distinct culture migrates into another context and interacts with a different cultural group (Berry, 1997). This brings up important questions: In American society, what ethnic groups are perceived as being more acculturated?

Are multiracial individuals who possess half White and half minority racial ancestries (i.e., biracial individuals) viewed as more or less acculturated than individuals who possess a single minority ancestry (i.e., monoracial minority individuals)?

Previous research indicates that individuals who are perceived as less acculturated and non-American are at a greater disadvantage than those who are perceived as acculturated. For example, prior studies suggest that individuals from any racial group other than White are perceived as less American, and, as a result, must combat feelings of social rejection, economic rejection, and job discrimination (Barlow, Taylor, & Lambert, 2000; Yogeeshwaran & Dasgupta, 2010). According to the 2008 immigrant census, by the Pew Foundation, 56% of Americans prefer living in a community with a small immigrant population, and only 24% prefer to live in communities with a large immigrant population (Taylor, Morin, Cohn, & Wang, 2008). The most recent 2013 Pew Foundation census suggested that over half (55%) of adult Americans said that strong conflicts between immigrants and non-immigrants exist today (Morin & Motel, 2013). For example, research suggests that Asian Americans may face identity denial, a phenomenon in which White Americans call into question Asian's American identity, and perceive Asian Americans as less American compared to White Americans (Cheryan & Monin, 2005). Thus, stigma against less acculturated and non-American individuals currently exists. However, little research has examined perceptions of acculturation for biracial individuals, those with half White and half minority ancestry. What serves to cue whether biracials, those possessing both majority and minority ancestry, are perceived as acculturated and American by the predominantly White American population?

Biracial Ancestry in Racial Categorization and Acculturation

Previous research has demonstrated that racial categorization, assigning an individual to a single racial category, may influence perceptions of acculturation. Being racially categorized as White may result in greater perceptions of acculturation. White American targets are generally viewed as more American than targets of minority ancestry, such as Asian Americans, African Americans, and Latino Americans (Devos & Banaji, 2005; Devos, Gavin, & Quintana, 2010; Devos & Heng, 2009; Devos & Ma, 2008; Rydell, Hamilton, & Devos, 2010).

The ease of racial categorization may be challenged when individuals have biracial ancestry. Recent research indicates inconsistencies in the racial categorization of individuals with biracial ancestry (Sanchez, Good, & Chavez, 2011; Young, Sanchez, & Wilton, 2013). Minority categorization was consistent with the concept of hypodescent in previous research. Hypodescent is the automatic categorization of a multiracial individual with part White and part minority ancestry to the minority group (Sanchez et al., 2011). For instance, perceivers categorized individuals with one Black minority parent as the minority race when cues of Black ancestry were given (Peery & Bodenhausen, 2008). This effect was stronger for African American targets than for Asian American targets (Ho, Sidanius, Levin, & Banaji, 2011). Conversely, additional evidence suggested another pattern of racial categorization that deviated from patterns of hypodescent. Multiracial parents categorized less their children as minority and more frequently labeled them as Multiracial or White (Brunsma, 2005). Although the study examines parents' perceptions, the pattern of racial categorization may indicate the beginning of a shift towards less reliance on a one-drop rule for multiracial children. Work on deliberate categorization shows that targets with biracial ancestry were categorized as both minority and White. Perceivers racially categorized a target indicating the percentage of both White and Black ancestry they possessed: Monoracial White targets, identified as 100% White and 0% Black; Monoracial Black targets, identified as 100% Black and 0% White, and Biracial targets, varied in the percentage of both Black and White ancestry they possessed. For instance, some biracial targets identified as 50% Black and 50% White and other biracials identified as 75% Black and 25% White. Participants categorizing the biracial targets focused on the percentage of both White and Minority ancestry that the target indicated (Good, Sanchez, & Chavez, 2013; Sanchez et al., 2011). Specifically, higher percentages of White ancestry in biracials were associated with incremental decreases in Black categorization (Good et al., 2013; Sanchez et al., 2011). In addition, in another published study, participants who were described as Black/White biracial were less likely to be categorized as Black compared to those who were described as Black with no biracial ancestry indicated (Young et al., 2013). Given that the mention of White ancestry influenced participants' racial categorization in prior research, it is reasonable to expect that biracials will be perceived as more White compared to monoracial minorities because biracials possess White ancestry.

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Taken together, these studies suggest that when given the opportunity to categorize biracial targets, the rule of hypodescent may not be consistently followed. People tend to categorize biracial targets differently from monoracial minority targets. Thus, biracial ancestry has challenged and complicated perceptions of racial categorization. However, little research has examined if biracial ancestry can also challenge additional perceptions. To what extent can biracial ancestry similarly complicate the perception of being “American”? The present study examines whether biracial ancestry (half white/half minority) increases perceptions of acculturation for African American, Asian American and Latino American targets.

Socioeconomic Status in Acculturation Perception and Racial Categorization

One of the dominant cues of what being “American” means is the economic and social success, where financial success is believed to be a virtue of the American Dream (Hochschild, 1995). Past research has identified trends suggesting that immigrants are more likely to be from lower socioeconomic statuses compared to native citizens (Beiser, Hou, Hyman, & Tousignant, 2002). Additionally, approximately 17% of immigrants in the United States live in poverty, while the number of U.S. born citizens living in poverty reaches 12%. Moreover, about 24% of African Americans and 23% of Latino Americans are living in poverty compared to 8% of Whites in poverty (Hoynes, Page, & Stevens, 2006). Socioeconomic status, social and economic position relative to others, can act as a cue that serves to form further impressions.

Recent findings suggest that socioeconomic status is often used as a cue for racial categorization for both monoracial minority individuals and biracial individuals. Moreover, SES directly influences perceptions of racial categorization (for a review, see Sanchez & Garcia, 2012). Although Monoracial individuals were less likely to be categorized as White, interviewers were more likely to classify them as Black if they had experienced a drop in their socioeconomic status (i.e., incarcerated, unemployed, or low income) regardless of how they were racially categorized beforehand (Penner & Saperstein, 2008). Moreover, individuals from the same study were more likely to racially categorize themselves as Black if they had experienced the same drop in their socioeconomic status. This finding suggests that socioeconomic status is a salient cue that individuals

use to form impressions and that not only do changes in status influence perceptions of racial categorization, but also that SES influences perceptions of acculturation. Interviews of monoracial African Americans from both high and low SES suggest differences in acculturation perceptions. African Americans from lower SES reported being perceived by White Americans as being less American compared to those of higher SES (Barlow et al., 2000). However, previous research has not yet examined how SES may influence perceptions of acculturation for individuals of biracial ancestry. Thus in the present study, we sought to discover how the signaling of an economic cue may influence perceptions of acculturation of African Americans, Asian Americans and Latino Americans of biracial and minority monoracial ancestry.

The Present Study

In the present study, we test whether ancestry (Biracial, half White/half Minority, or Monoracial Minority) and socioeconomic status (higher SES/lower SES) serve to inform acculturation perceptions and racial categorizations for Asian Americans, Latino Americans, and African Americans. The three ethnicities were chosen because of their relatively large presence in the contemporary United States population. Together, African Americans, Latino Americans and Asian Americans represent over 20% of the ethnic population, and American perceivers would have strong schemas of these groups (Humes et al., 2011). Participants read a brief excerpt from a college admissions essay designed to manipulate ancestry and SES. Previous studies that manipulated SES used visual images of clothing depicting status or occupation, or cues of occupational status (Freeman, Penner, Saperstein, Scheutz, & Ambady, 2011; Weeks & Lupfer, 2004). Since participants in the present study were students, utilizing an essay format allowed for an easily controlled manipulation of SES in a realistic context.

Additionally, language has been determined to be one of the primary aspects of acculturation perception as well as of ethnic identity (Laroche, Kim, Hui, & Tomiuk, 1998; Noels, Pon, & Clément 1996). Language is identified as a cultural practice, and thus the ability to speak the language of a new context is a measure of a cultural behavioral change (Schwartz et al., 2010). Previous work studying Asian Americans suggested that English language competence was a better indicator of acculturation relative to other culture-related domains (Kang, 2006).

Furthermore, prior research demonstrates that language operates as a variable that cues acculturation. For example, Latino Americans who spoke English were perceived as more acculturated and less minority than Latino Americans who spoke their native language (e.g., Spanish; Sanchez, & Chavez, 2010; Wilton, Sanchez, & Chavez, 2013). For that reason, language abilities served as the measure of perceived acculturation. In addition, the perception of acculturation and whiteness was tested among three different groups: African Americans, Asian Americans and Latino Americans. Considering the different immigration status of these different ethnic groups (Schwartz et al., 2010), we investigated whether ethnicity (e.g., being African American as opposed to Asian American) resulted in different perceived levels of acculturation and White categorization.

A total of four hypothesis will be tested in the following study. Our first hypothesis is that ethnicity and ancestry will interact to influence acculturation perceptions (hypothesis 1). Our second hypothesis is that ethnicity and socioeconomic status will interact to influence acculturation perceptions (hypothesis 2). For instance, a biracial individual who is half African American and half White will be perceived as more acculturated (hypothesis 1) when more White compared to an individual whose both parents are African American, or to a person who is biracial from another Minority group. We test the hypotheses regarding ancestry and SES (hypothesis 2) on African Americans, Latino Americans, and Asian Americans. We expected Asian Americans and Latino Americans to be viewed as less acculturated in general than African Americans because of their recent and salient immigration status compared to that one of African Americans' (Schwartz et al., 2010). Our third hypothesis is that, in keeping with the previous research, biracial (White and minority ancestry) individuals will be categorized as more White than those with monoracial minority ancestry (hypothesis 3). Our fourth hypothesis is that individuals of higher SES will correspond to a greater White categorization compared to lower-SES participants (hypothesis 4). Overall, any deviation from being a minority (socioeconomically or ancestrally) was expected to predict a greater perceived acculturation and perceived White categorization.

Method

Participants

Participants in this study were recruited through Mechanical Turk, an online survey participation website where the computer randomly assigned participants to conditions. Previous research identified MTurk as a valid source of data acquisition (Buhrmester, Kwang, & Gosling, 2011). Each participant was compensated with \$0.50 upon the completion of the survey. Originally, there were 335 participants, but an instructional manipulation check was included at the end of the survey to make sure the participants were paying attention to the questions. The instructional manipulation-check question was "What state do you currently live in?" And then, the instructions of the survey told the participant to respond with the phrase "I have read the instructions". It was found that 65 out of 354 respondents did not complete or failed to pass the manipulation check (18% of the cases). Following Oppenheimer, Meyvis and Davidenko (2009), any participant failing to pass this question was excluded from further analyses.

For the remaining 289 participants, the sample included 155 Females, 132 Males, 2 others. Ages ranged from 18 to 66 years ($M = 33.38$, $SD = 11.59$). Participants indicated their racial background, and were allowed to select more than one option. A total of 233 identified as White, 23 identified as African American, 22 identified as Asian American, specifically, 11 identified as Southeast Asian, 7 identified as East Asian, and 4 identified as South Asian. The sample also included 13 identified as Hispanic/ Latino, 6 identified as American Indian/ Native Alaskan, 3 identified as Middle Eastern/North African, and 3 identified as Pacific Islander. Educational achievement ranged from 1 some high school (1%) to 9 other advanced graduate degrees (1%), where 2 is high school (11%), 3 is some college (43%), 4 is Bachelors' degree (BA/BS) (27%), 5 is some graduate school (4%), 6 is Masters Degree (MA, MS, MFA) (10%), 7 is MD/JD/MBA (2%), and 8 is PhD/Dr.Ph/Ed.D (1%).

Procedure

Participants read a brief excerpt from a college admissions essay. The essay stimuli were designed by the authors. The essay contained several spelling and

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grammatical errors so participants could interpret it as being realistic. In the essay, the target identified himself/herself (gender is not specified) as minority ethnicity, either Asian American, Latino American or African American. The target identified as either having monoracial minority ancestry or having biracial ancestry. The monoracial minority ancestry targets noted that both parents were of the same minority group (i.e., both African American). Biracial ancestry targets noted that one parent was minority and one parent was White. Next, the applicant indicated his/her SES in two ways. First the applicant indicated whether his/her parents went to college (higher SES/middle class) or not (lower SES/working class). Second, the applicant disclosed the type of neighborhood (wealthy or poor) that he/she grew up in. Participants read one of twelve possible essays following a 3 (Ethnicity: Asian American, African American, or Latino American) X 2 (Socioeconomic Status: Low or High) X 2 (Ancestry: Biracial Half White/ Half Minority, or Monoracial Minority) design. The participants were instructed to read the college admissions essay (see Appendix A for sample essay) and were informed that questions pertaining to the essay would follow. Two sample items include, “This applicant indicated what racial background?” and “Did the applicant’s parents go to college?” Participants responded to measures of diversity scholarship support, racial categorization, perceived acculturation, perceived discrimination, and attitudes toward affirmative action, respectively.

Measures

Racial categorization. To measure racial categorization, we used the measures from prior research (Good et al., 2013; Sanchez et al., 2011) assessing racial categorization of biracial targets. The racial categorization section included four questions, which asked about how White (two items) or Minority (two items) the target was perceived by the participant. The wording of the minority questions was dependent on the ethnicity condition. For instance, if the participant was assigned to an Asian American target, the minority question asked about how Asian American the target was perceived to be. All of the questions used the same rating scale, where 1 was labeled as *Not at all* and 5 was labeled as *Very Much*. The questions included, “To what extent do YOU view this applicant as: White/Minority” as well as, “To what extent do YOU think of this applicant as: White/Minority.” The two White items of perceiver categorization held together reliably

($r = .94$, $p < .001$). The two Minority items of perceiver categorization also held together reliably ($r = .90$, $p < .001$). Because the White and Minority categorizations were negatively correlated ($r = -.39$, $p < .01$), a difference score was created for the relative White/Minority perceiver categorization level such that higher scores corresponded with greater White categorization.

Acculturation. Language abilities served as the measure of perceived acculturation. Perceptions of acculturation were measured by the impression of the applicant’s language fluency using a 5 item scale. These items were based on measures of acculturation that typically assess self-identities (e.g., Marin & Marin Acculturation Scale; Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987). For example, items that were worded, “What languages do you usually speak at home?” and “In which language(s) do you usually think?” were changed to “In general what language(s) do you think the applicant speaks?” and “In what language(s) do you think the applicant thinks?” The wording of the anchors for each item varied in each condition in order to match the correct minority language. For instance, the scale for Asian American targets was measured from 1 (*only Asian language*) to 5 (*only English language*). The language scale was also determined to be reliable using Cronbach’s alpha ($\alpha = .94$).

Results

Preliminary Analysis

Initial analyses suggested no outliers but the Shapiro Wilks test suggested that data was not normally distributed for racial categorization and acculturation, but GLM methods (of which ANOVAs are apart of) have proven robust for normality assumptions (Cohen, Cohen, West, & Aiken, 2003). Box-cox transformation was performed to force a normal distribution, and significance of results and direction were unchanged. For ease of interpretation untransformed results are presented.

Planned Analyses

Recall that the design of this particular study was a 3 (Ethnicity: Asian American, African American or Latino American) X 2 (Socioeconomic Status: Low or High) X 2 (Ancestry: Biracial Half White/ Half Minority or Monoracial Minority) design. Therefore, two separate 3x2x2 ANOVAs were conducted in order

to test the independent and interactive roles of ancestry, SES, and ethnicity on acculturation perceptions (hypotheses 1 and 2) and racial categorization perceptions (hypothesis 3 and hypothesis 4). Then, follow up ANOVAs were executed with Bonferroni corrections for multiple comparisons.

Acculturation Perception

To test hypotheses 1 and 2, we ran a 3 (Ethnicity: Asian American, African American, or Latino American) X 2 (Socioeconomic Status: Low or High) X 2 (Ancestry: Biracial Half White/Half Minority or Monoracial Minority) ANOVA. First, we found a significant main effect of ethnicity on perception of acculturation $F(1, 288) = 77.59, p < .001$. Follow up tests with Bonferroni corrections were conducted to compare perceptions of acculturation for the three different ethnic groups (Asian Americans, African Americans, and Latino Americans). We found that African Americans ($M = 4.70, SD = 0.64$) were perceived as the most acculturated compared to Asian Americans ($M = 3.67, SD = 0.91, p < .001$) and Latino Americans ($M = 3.43, SD = 0.84, p < .001$). There was no significant difference between Asian American and Latino Americans ($p = .098$). There was a second significant main effect of ancestry on acculturation perception, $F(1, 288) = 33.35, p < .001$. As expected, there was a significant difference in acculturation perceptions between Biracial individuals ($M = 4.21,$

$SD = 0.79$) and monoracial minority individuals ($M = 3.70, SD = 1.05$). There was a significant interaction between ethnicity and ancestry on acculturation perceptions, $F(1, 288) = 5.89, p = .003$. Last, we found a significant interaction between ethnicity and SES on acculturation perceptions, $F(1, 288) = 6.15, p = .002$. There were no other significant main effects or significant interactions. Follow up analyses of the two significant interactions of hypothesis 1 (Ethnicity x Ancestry on acculturation perceptions) and hypothesis 2 (Ethnicity x SES on acculturation perception) were conducted.

Hypothesis 1

To further analyze the significant interaction of ethnicity and ancestry $F(1, 288) = 5.89, p = .003$, the file was split by each of the ethnic groups (Asian Americans, African Americans and Latino Americans) to examine the effect of ancestry on acculturation perceptions within each ethnicity group (see Figure 1). Examining the data within each ethnic group, the results showed a simple effect of ancestry for Latino American targets, $F(1, 88) = 21.75, p < .001$, as well as for Asian American targets, $F(1, 100) = 17.65, p < .001$. For Latino American targets, biracial individuals were perceived as more acculturated ($M = 3.80, SD = 0.72$) than monoracial Latino Americans ($M = 3.08, SD = 0.81$).

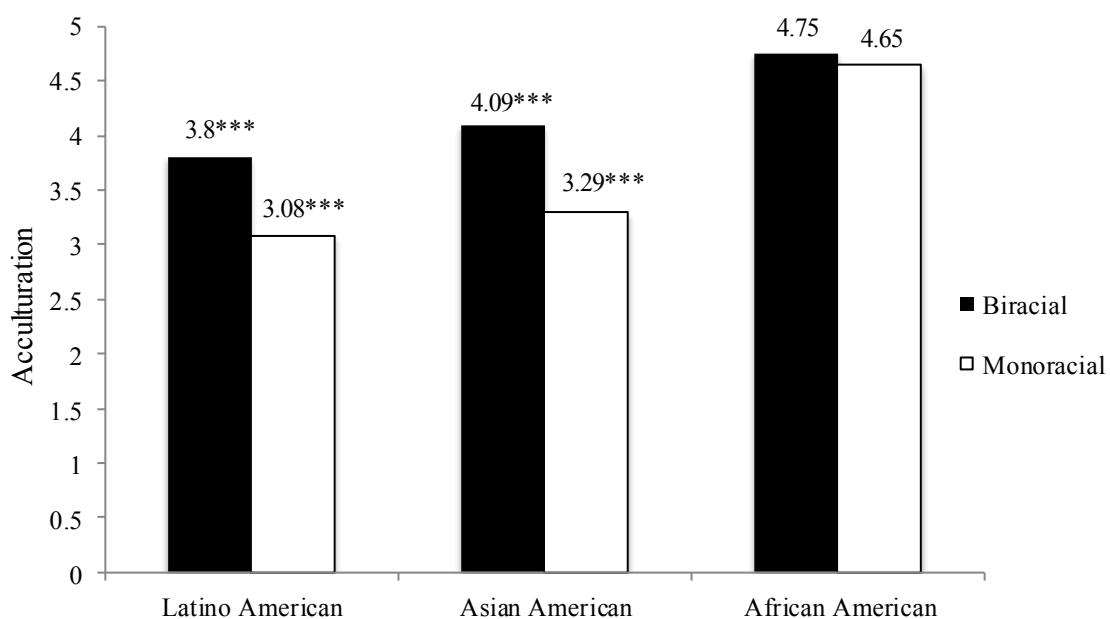


Figure 1. The interaction effect of ethnicity and ancestry on acculturation perceptions.
Note. *** $p < .001$.

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For the Asian American targets, the same results occurred, where biracial individuals ($M = 4.09$, $SD = 0.72$) were seen as more acculturated than monoracial Asian Americans ($M = 3.29$, $SD = 0.88$). No effect of biracial ancestry was found for the African American targets. Consistent with the hypotheses, biracial ancestry cued greater perceptions of acculturation, but for only Asian Americans and Latino Americans.

Hypothesis 2

To further analyze the significant interaction of ethnicity and SES $F(1, 288) = 6.15$, $p = .002$ the file was split by each of the ethnic groups (Asian Americans, African Americans and Latino Americans) to examine the effect of SES on acculturation perceptions within each ethnicity group (see Figure 2). There was no simple effect of SES on either African American, $F(1, 98) = 0.24$, $p = .623$, or Asian American targets, $F(1, 100) = 1.03$, $p = .313$. However, there was a significant simple effect of SES on Latino American targets, $F(1, 98) = 14.95$, $p < .001$. In this case, the Latino American target with high SES was seen more acculturated ($M = 3.77$, $SD = 0.81$) than the lower status Latino Americans ($M = 3.17$, $SD = 0.76$). As predicted, SES was associated with greater perceptions of acculturation, but for Latino Americans only.

Racial Categorization

To test hypotheses 3 and 4, we ran a 3 (Ethnicity: Asian American, African American, or Latino American) X 2 (Socioeconomic Status: Low or High) X 2 (Ancestry: Biracial Half White/ Half Minority or Monoracial Minority) ANOVA. Recall that categorization was measured with difference scores for the relative White/Minority perceiver categorization level. Scores at zero reflect equal Minority and White categorization, while scores above zero reflect White categorization, and numbers below zero reflect Minority categorization. Both hypotheses were confirmed and are further described in subsections below. First, we found a non-hypothesized main effect for ethnicity on racial categorization, $F(1, 288) = 5.66$, $p = .004$. Follow up tests with Bonferroni corrections for ethnicity were conducted in order to compare multiple ethnicity means (African Americans, Asian Americans, and Latino Americans). Individuals who were described as African Americans ($M = -1.89$, $SD = 1.88$) were seen as more minority than Latino Americans ($M = -1.36$, $SD = 1.84$, $p = .003$). No differences were found between comparing African Americans and Asian Americans ($M = -1.69$, $p = .604$) as well as comparing Latino Americans and Asian Americans ($p = .146$). Surprisingly, we found a marginally significant interaction between ancestry and SES on racial categorization, $F(1, 288) = 3.60$, $p = .060$.

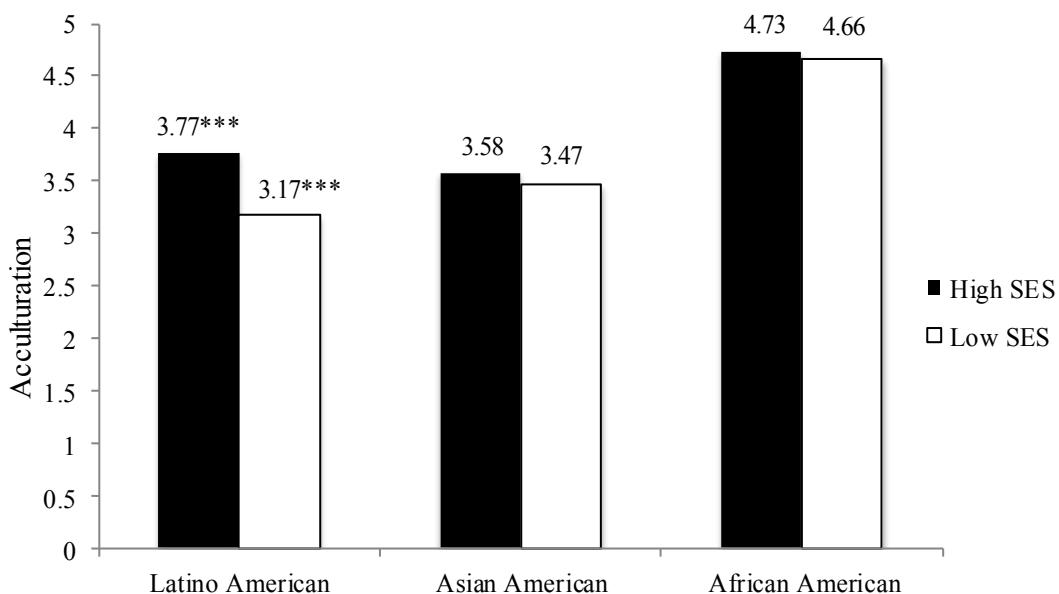


Figure 2. The interaction effect of SES and ethnicity on acculturation perceptions.
Note. *** $p < .001$.

Table 1
Correlations between Acculturation and Racial Categorization

	Overall	Asian	Black	Latino
White Categorization and Acculturation Perception	.24**	.44**	.09	.54**

Note. ** $p < .01$.

In order to interpret the ancestry and SES interaction, effects were examined by ethnicity and revealed that SES predicted racial categorization for those of monoracial minority ancestry, $F(1, 166) = 5.96, p = .020$. The results suggest that monoracial minority individuals of lower SES were considered less White ($M = -3.45, SD = 0.99$) than monoracial minority individuals of higher SES ($M = -3.01, SD = 1.45$). No significant simple effect of SES was found for those of biracial ancestry, $F(1, 121) = .03, p = .870$.

Hypothesis 3

In keeping with the third hypothesis, there was a main effect of ancestry on racial categorization, $F(1, 288) = 559.06, p < .001$, with a significant difference between individuals of biracial ancestry ($M = -0.08, SD = 0.83$) and individuals of monoracial minority ancestry ($M = -3.24, SD = 1.25$). However, this simple effect is qualified by the interaction with SES described above.

Hypothesis 4

In partial support of hypothesis four, a marginally significant main effect of SES on racial categorization was revealed, $F(1, 288) = 2.98, p = .090$, suggesting that individuals of higher SES ($M = -1.71, SD = 1.92$) were seen as more White compared to individuals of lower SES ($M = -2.10, SD = 1.89$). However, this simple effect is qualified by the interaction with ancestry described above.

Relationship Between Acculturation and Racial Categorization

Lastly, non-hypothesized bivariate correlations, which explore the relationship between acculturation perception and racial categorization, were examined. These analyses demonstrate how acculturation and racial categorization are interrelated. In general,

targets that were perceived as being more acculturated were concurrently racially categorized as White (see Table 1). In addition to the overall bivariate comparisons, the file was split by each of the ethnic groups (Asian Americans, African Americans and Latino Americans) in order to determine whether similar relationships were found for each group (see Table 1). Similar to the overall correlations across all ethnic groups, Asian American targets that were perceived as being acculturated were also perceived as being White (see Table 1). The Latino American targets demonstrated a similar pattern. The Latino American targets that were perceived as being acculturated were also perceived as being White (see Table 1). Interestingly, no significant correlations between perceptions of acculturation and racial categorization were found for African American targets. In summary, our correlation table highlighted an existing relationship between perceptions of acculturation and racial categorization for Asian American and Latino American targets. However, that relationship was ethnicity dependent and no significant relationship was discovered for African Americans.

Discussion

To our knowledge, the current study is the first exploration of the potential impact of socioeconomic status (SES) and biracial (half White/half Minority) ancestry on acculturation perceptions and the racial categorization of different ethnic groups. First, as predicted, ethnicity and ancestry interacted and influenced acculturation perceptions. Biracial Latino Americans were perceived as more acculturated compared to monoracial Latino Americans, and biracial Asian Americans were perceived as more acculturated compared to monoracial Asian Americans. For African American targets, however, ancestry did not significantly impact judgments of acculturation. In fact, African Americans were overall perceived to be more acculturated compared to both

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Asian Americans and Latino Americans. Thus, the cue of White ancestry may not have much influence on acculturation perceptions for all groups. These ethnic group differences may also be due to the perceived and actual immigrant populations in the United States. According to recent U.S. Census data (Grieco et al., 2012), the foreign born U.S. population consists predominantly of individuals born in Asia (28%) and Latin America (53%) compared to 4% born in African countries. These findings suggest that White ancestry largely cues acculturation for groups associated with regions that frequently migrate to the United States. For this reason, many American perceivers may hold beliefs associating immigration with Asian and Latino groups, which in turn may influence their perceptions of Asian Americans and Latino Americans. Future studies should examine the role of White ancestry in other populations that represent groups with high or low migration history in order to test the conditions and moderators of the link between White ancestry and acculturation.

Second, the current study found that ethnicity and socioeconomic status interacted and influenced acculturation perceptions. Individuals of a higher socioeconomic status were considered more acculturated than individuals of a low socioeconomic status, but only for Latino American targets. The restriction of this finding to Latino Americans was unexpected. Future studies should examine the stereotype content of various ethnic groups regarding SES to provide a complete picture of the role of SES in racial perception. These findings suggest that SES may be a crucial factor in determining the bias against Latino American targets. For instance, higher SES Latino American targets perceived as more acculturated may be less discriminated compared to lower SES Latino American targets.

Third, the correlation analyses showed that greater perceived acculturation was positively correlated with White racial categorization. The relationships between perceptions of Whiteness and acculturation mimic the previous findings of Devos and Banaji (2005) in such a way that perceived acculturation was highly associated with the White racial category. However, the relationship was only significant for Asian Americans and Latino Americans, not for African Americans. Again, the previous study examined this effect implicitly while the present correlations were formed via explicit perceptions. The lack of relationship for African Americans may be explained

by the conflicting perceptions of African Americans, where they are perceived as being the most American and the least White compared to both Latino Americans and Asian Americans.

Acculturation perceptions represent an important area of research because Americans may hold anti-immigration attitudes that may lead to bias against individuals who are perceived as less acculturated. Thus, biracials perceived as non-acculturated may experience discrimination faced by minorities. For example, prior research shows that individuals hold very negative attitudes towards individuals who do not speak English; it also shows that the former ones perceive this as a cultural threat that triggers anti-immigration attitudes and beliefs (Chandler & Tsai, 2001). As previously mentioned, recent findings suggest that there is a stigmatization against immigrants in the United States (Morin & Motel, 2013; Taylor et al., 2008). Anti-immigration attitudes may not only result in discrimination but may also result in lack of access to jobs, and marginalization of social resources (Schwartz et al., 2010).

The present study expanded on an existing body of research focused on White categorization and acculturation (Devos & Banaji, 2005; Devos & Heng, 2009; Devos & Ma, 2008; Devos et al., 2010; Rydell et al., 2010). While prior studies primarily examined implicit associations between racial groups and acculturation, our study concentrated on explicit judgments of racial categorization and acculturation. Additionally, our findings also further previous research demonstrating that ancestry is taken into account when forming perceptions (Sanchez et al., 2011). These findings also suggest that SES influences categorization of seemingly monoracial targets. The results of the current study follow the suggested pattern discovered by Penner and Saperstein (2008), where monoracial individuals were more likely to racially categorize themselves as Black if they had experienced a drop in their socioeconomic status. While this prior work compared racial categorizations before and after a change in SES, our single categorization still demonstrated the idea that high SES and White racial categorization are related, at least for monoracial targets.

The present study also demonstrates that perceptions of biracial individuals are malleable, depending on the cue (i.e., ancestry or SES) as well as on the ethnic group (i.e., Asian American, African

American, Latino American). This finding has important implications because it shows that perceptions of acculturation are complex and cue dependent. If acculturation perceptions of a group are malleable, then potential interactions with that group may be influenced as a result. For instance, specific biracial groups that are perceived as non-American may experience forms of discrimination not faced by other biracial groups. Additionally, participants' perceptions of biracial individuals may subsequently impact the way biracial individuals perceive themselves. Thus, institutions such as universities or workplaces should recognize that cues of one's ancestry might impact perceptions of being American and have the potential to influence behaviors, such as scholarship dispersal, and hiring or firing employees. Moreover, American citizens should recognize that these similar cues might impact decisions in the political sphere such as voting for a candidate.

Limitations and Caveats

The present study simultaneously examined, for the first time, a combination of ancestry and SES cues, and how they influence perceptions of acculturation across three different ethnicities. Although the current study focused on Asian Americans, African Americans and Latino Americans, pictures were not used to aid in the phenotypic identification of the applicants. Following Sanchez et al. (2011), the participants may have made assumptions about the targets' phenotypic appearances and used these assumptions while forming impressions of the target. Future research should examine how the addition of phenotypic cues may further impact multiple perceptions. Additionally, the participant sample size was notably depreciated as a result of the Instructional Manipulation Check. More responses from the participants could have been included in the data if a greater quantity of participants had demonstrated proper attention to the survey. However, the inclusion of the Instructional Manipulation Check was allowed for more reliable data as well as for greater statistical power (Oppenheimer et al., 2009). Furthermore, despite the ease with which the participants were gathered from the reliable online survey source, the participants' ethnicities did not represent a diverse population. The sample was largely White American (80%) and thus, our conclusions are tempered by this limitation. In initial analyses, we included the participants' race as a factor in the ANOVA; however, no significant interactions were found with the participants' race. The non-significant effects may be

due to the low racial diversity in the participant pool. Thus, question about whether these findings hold for minority race populations perceiving other minorities remains outside of the scope of this paper. Increasing the sample of minority participants would yield results that are more statistically representative of the American population. Future research should examine if the current findings hold for a more diverse participants' sample.

Our final limitation to the study was the use of English language proficiency as the primary measure of acculturation into American society and the reliance on a college essay to cue SES. Prior work suggests that acculturation is a multidimensional model composed of various interrelated items that include language and other cultural indicators (Schwartz et al., 2010); nevertheless, it is unclear whether other measures of acculturation would lead to similar results. Similarly, using the college essay rather than the occupational status as the SES cue may influence the results. Utilizing visual images of clothing depicting status or occupation to manipulate SES may be a more salient cue than an essay (Freeman et al., 2011; Weeks & Lupfer, 2004). Future research should include broader measures of acculturation and see how different types of SES cues may influence specific aspects of acculturation.

Conclusion

This study demonstrates the importance of cues of SES and biracial ancestry in acculturation and racial categorization perceptions, and how these cues differ for perceptions of Asian Americans, Latino Americans, and African Americans. Results show that SES and biracial ancestry serve to influence both acculturation perceptions and racial categorization, which may have important implications for prejudice and intergroup relations. Moreover, this work adds to a limited but growing literature on biracial populations, for whom categorization is complex. These findings suggest that categorizing Asian American and Latino American biracial individuals as White may result in perceiving them as Americans.

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Orientation de la dominance sociale et réaction à l'altruisme d'un exogroupe de statut fort : contribution au modèle de Nadler

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Cette étude évalue l'effet de l'orientation de la dominance sociale des membres des groupes de statut faible sur leur réaction à l'altruisme d'un exogroupe de statut fort. Elle s'inscrit dans le cadre du modèle proposé par Nadler (2002), qui dispose que dans les situations d'asymétrie de statuts entre les groupes, l'altruisme intergroupe est un instrument de dominance. L'hypothèse mise à l'épreuve dans la présente recherche postule que : l'orientation de la dominance sociale des membres des groupes de statut faible prédit leur réaction à l'altruisme d'un exogroupe de statut fort. Cette hypothèse, qui constitue son principal apport théorique, est soutenue par les données recueillies dans une expérience menée auprès de 100 participants des deux sexes, fréquentant le Collège Albert Camus de la ville de Dschang (Cameroun).

Mots-clés : orientation de la dominance sociale, altruisme, intergroupe, asymétrie des statuts, stabilité

This study evaluates how low status group members react to high status group helping depending on the level of Social Dominance Orientation. It lies within the scope of the model suggested by Nadler (2002), which proposes that in situations of asymmetry of status between groups, helping behavior is an instrument of dominance. The hypothesis tested in the current research postulates that: the Social Dominance Orientation of low status group members predicts their reaction to high status group helping. This hypothesis which constitutes this article's main theoretical contribution is supported by data collected in an experiment carried out with 100 participants of the two sexes, attending Albert Camus High School in the city of Dschang (Cameroon).

Keywords: Social Dominance Orientation, altruism, intergroup, asymmetry of status, stability

En raison de problèmes politiques historiques et contemporains, les relations entre Juifs et Arabes au Proche-Orient sont marquées par le sceau de l'antagonisme (Halabi, Dovidio, & Nadler, 2008). Les relations entre Israéliens et Palestiniens en sont l'exemple le plus éloquent. Malgré le fait que la cohabitation entre ces deux peuples soit marquée par la séparation sociale et économique, ainsi que les conflits politiques et des confrontations périodiques

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violentes, il demeure que leur contact permanent, sur la terre qu'ils revendiquent tous, génère un haut degré d'interdépendance.

Pour Kelman (1999) que reprennent Halabi et al. (2008), l'interdépendance entre Israéliens et Palestiniens peut être considérée comme négative pour les identités nationales, en raison du fait qu'elle se manifeste prioritairement par la violence, les tensions, un climat de suspicion, un manque de confiance, et des menaces qui sont d'importants obstacles à une paix durable. La conséquence de ce climat délétère est que même les actes prosociaux les plus ostensibles, comme l'assistance intergroupe, sont interprétés négativement, et exacerbent des tensions déjà vives. Par exemple, Nadler et Saguy (2004) révèlent

que l'aide proposée par le gouvernement israélien aux populations palestiniennes après la conférence d'Oslo (1993) a été rejetée par ces dernières, alors qu'elles sont dans le besoin. Ainsi, pourquoi les Palestiniens refusent-ils l'aide proposée par les Israéliens? Au-delà du problème spécifique des relations entre ces deux peuples, cette question attire l'attention sur les situations où un groupe qui se trouve pourtant dans le besoin refuse cependant d'accepter l'assistance des exogroupes qui manifestent leur sollicitude à son égard. Elle sert de base au modèle de Nadler (2002) sur l'altruisme intergroupe, objet de la présente recherche.

L'altruisme intergroupe

L'altruisme désigne un ensemble de comportements d'aide dirigés vers autrui (Penner, Dovidio, Piliavin, & Schroeder, 2005). Ces comportements d'aide ont une double caractéristique : 1) en principe, les personnes qui les posent n'en tirent aucun bénéfice ; 2) ils ont toujours un coût. Ainsi, ceux qui s'y engagent portent assistance à autrui à leurs dépens (Simpson & Willer, 2008). C'est la raison pour laquelle, dans une perspective de rationalité économique, la prosociabilité peut être considérée comme une « anomalie » théorique, dans ce sens qu'en règle générale, les individus se préoccupent prioritairement de leurs intérêts personnels (Griskevicius, Tybur, & Van den Bergh, 2010). Cependant, une analyse fine révèle qu'elle n'est pas dénuée d'intérêt pour les aidants, puisque l'assistance à autrui peut leur procurer des bénéfices. Cela est valable autant pour les individus que pour les groupes (Andreoni & Rao, 2010; Karlan & McConnell, 2012 ; Mifune, Hashimoto, & Yamagishi, 2010). Malheureusement, si la recherche sur l'altruisme interpersonnel est bien documentée (voir Penner et al., 2005), ce n'est pas le cas pour la prosociabilité intergroupe, à laquelle très peu d'intérêt a été accordé jusqu'au début des années 2000 (Nadler, 2002; Stürmer, Snyder, & Omoto, 2005). Or, le fait qu'il existe de nombreuses relations d'aide entre les groupes, à l'instar de l'aide internationale accordée aux pays pauvres ou en situation de catastrophe, justifie qu'on porte une attention particulière à cette modalité des relations intergroupes.

La théorie de l'auto-catégorisation s'intéresse aux mécanismes par lesquels les individus en arrivent à se définir comme membres de groupes au sein de la structure sociale. En accord avec ce qui précède, cette théorie soutient que dans les situations où les

appartenances groupales sont rendues saillantes (Licata, 2007; Turner & Oakes, 1986), le comportement d'un membre d'un groupe à l'égard d'un membre d'un autre groupe peut se concevoir comme un comportement intergroupe. Or, les relations intergroupes sont généralement asymétriques, puisque certains groupes ont un statut fort, tandis que d'autres ont un statut faible (Pratto, Sidanius, Stallworth, & Malle, 1994). Ces statuts déterminent leurs accès respectifs à différents services et ressources (argent, terre, éducation, santé). Les groupes de statut fort y ont un accès privilégié, tandis que les groupes de statut faible en sont privés. Cette asymétrie de statut, de pouvoir et d'accès aux ressources reflète et affecte même l'altruisme intergroupe (Worchel, 1984). Dans cette perspective, l'assistance proposée par un groupe peut être perçue comme un moyen de maintenir l'asymétrie des statuts avec le groupe bénéficiaire, puisque c'est généralement le groupe qui a un accès privilégié aux ressources (le groupe de statut fort) qui est le plus susceptible de proposer son assistance aux groupes dont l'accès aux ressources est limité (groupe de statut faible). Cette conception qui matérialise le lien entre auto-catégorisation et altruisme intergroupe, constitue l'un des fondements de la thèse défendue par le modèle de Nadler (2002).

Le modèle de Nadler

Après des années de recherche sur l'altruisme, Nadler en arrive à la conclusion que les personnes qui reçoivent de l'aide se sentent inférieures, voire dépendantes du donateur (Nadler, 1991; Nadler & Fisher, 1986). Cette dépendance constitue une menace pour leur estime de soi. Pour l'éviter, elles peuvent se résoudre à refuser cette aide (Nadler, 1987). Ces observations sont particulièrement pertinentes dans l'analyse des réactions à l'*Affirmative action*, la politique américaine d'aide aux minorités ethniques. En effet, ses partisans arguent qu'elle remédie à des années de discrimination et de traitements injustes en permettant un accès plus facile des membres des groupes désavantagés aux positions de leadership. En revanche, ses opposants estiment qu'elle porte paradoxalement préjudice, en les marquant du stigmate de l'incompétence, et en renforçant les stéréotypes traditionnels sur leur incapacité à accéder à des positions hiérarchiques élevées sans assistance (Crosby & Van de Veer, 2000). À titre illustratif, les résultats de recherche révèlent que les femmes sélectionnées pour assumer des rôles de leadership sur la base du genre évaluent leurs propres capacités de leader et leurs performances globales de manière peu

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favorable. En outre, elles préfèrent des tâches moins exigeantes que celles que choisissent leurs consœurs sélectionnées sur la base du mérite (Heilman, Rivero, & Brett, 1991).

Le modèle proposé par Nadler (2002) a deux fondements. Le premier, qui tire sa source de la théorie de l'identité sociale, suggère que les individus tiennent à maintenir ou à acquérir une identité sociale positive. D'après Licata (2007), l'identité sociale est la partie du concept de soi d'un individu qui résulte de la conscience d'appartenance à un groupe social et de la valeur et la signification émotionnelle qu'il attache à cette appartenance. Elle est dépendante des appartenances groupales et de la différenciation entre l'endogroupe et les exogroupes. La théorie de l'identité sociale soutient que l'information confirmant l'infériorité de l'endogroupe par rapport à l'exogroupe constitue une menace pour l'identité sociale de ses membres. La conséquence en est que ceux-ci peuvent faire recours à des réflexes de défense contre la menace que représente l'exogroupe, notamment en manifestant des comportements discriminatoires à son égard (Ellemers, Spears, & Doosje, 1999). Rapportées à la dynamique de l'altruisme intergroupe, ces données suggèrent que l'acceptation de l'aide d'un exogroupe pourrait confirmer l'infériorité de l'endogroupe, et compromettre le maintien d'une identité sociale positive chez ces membres. Ainsi, on peut considérer la réticence des Palestiniens à accepter l'aide proposée par les Israéliens comme un comportement dont le but est de maintenir une identité sociale positive.

Le second fondement émane de l'intégration de la littérature sur les relations intergroupes et sur le comportement prosocial. Il stipule que l'altruisme intergroupe pourrait refléter et être affecté par les rapports de pouvoir entre les groupes. Dans cette logique, les actes de proposition, de recherche ou d'acceptation de l'aide peuvent être conçus comme des affirmations ou des contestations de leurs relations de pouvoir. D'après Nadler (2002), ce fondement s'applique différemment aux membres de groupes de statut fort et à leurs homologues de statut faible dans les situations marquées par les inégalités sociales. Ainsi, les premiers apporteraient de l'aide aux seconds, non seulement parce qu'ils se sentent concernés par leur sort, mais aussi pour maintenir l'asymétrie intergroupe qui consacre leur supériorité. En acceptant cette aide, les membres de groupes de statut faible accepteraient tacitement leur infériorité et leur dépendance vis-à-vis de l'exogroupe. En

revanche, le refus de l'aide qui leur est proposée reflèterait leur détermination à maintenir ou affirmer leur indépendance, et à rechercher l'égalité avec le groupe de statut fort. En se rapportant aux relations entre Israéliens et Palestiniens, cela signifie concrètement que le refus des Palestiniens, groupe de statut faible, de recevoir de l'aide de la part des Israéliens doit être compris comme une contestation des relations intergroupes asymétriques, tandis que l'aide proposée par les Israéliens serait motivée par leur désir de maintenir leur dominance sur les Palestiniens.

Selon Nadler (2002), la dynamique de l'altruisme intergroupe dépend de deux variables conceptuelles pertinentes. La première a trait à la stabilité et la légitimité perçues de la hiérarchie intergroupe. Celles-ci font référence respectivement à la permanence de la hiérarchie dans le temps, et à son acceptation par tous les groupes. En général, une hiérarchie stable et légitime maintient le statu quo, puisqu'aucun groupe ne remet en question les relations intergroupes asymétriques. En effet, dans cette situation, les membres des groupes de statut faible se montrent souvent exofavorables (Baron & Banaji, 2009). Cela signifie qu'ils apportent leur soutien au groupe dominant, qui bénéficie pourtant des priviléges dont ils sont privés. Ce type de hiérarchie intergroupe est de nature à faire apparaître des comportements de justification du système chez les membres des groupes de statut faible. La caractéristique de ces types de comportements est qu'ils légitiment l'ordre social établi et justifient le statu quo (Jost, Kivetz, Rubini, Guermani, & Mosso, 2005). Selon Jost (2001), ces comportements sont compréhensibles si on prend en compte le fait que les individus préfèrent souvent préserver l'ordre social, même au détriment de leurs intérêts individuels et collectifs.

Une hiérarchie instable et illégitime est une source de menace pour les groupes de statut fort, en raison du fait que leur position dominante est contestée par les membres des groupes défavorisés. La raison en est que du point de vue de l'identité sociale, ces individus se différencient de leurs homologues qui se trouvent dans une situation où la hiérarchie intergroupe est à la fois stable et légitime. En effet, chez eux, une hiérarchie sociale instable et illégitime génère la recherche du changement social, une stratégie collective de changement de statut (Licata, 2007). Cette recherche se situe dans la perspective de la quête d'une identité sociale positive. Elle passe souvent par le conflit intergroupe, dans la mesure où le groupe dominant

veut maintenir sa position et conserver ses priviléges, tandis que le groupe dominé veut accéder à un statut fort pour acquérir les priviléges dont il est privé. C'est le cas dans les relations entre Israéliens et Palestiniens évoqué plus haut.

La seconde variable qui affecte l'altruisme intergroupe est relative à la nature de l'aide proposée. dépendante (Nadler, 2002). La première consiste à proposer au groupe en difficulté, une assistance constituée de moyens pour résoudre lui-même son problème. Le but de ce type d'aide est d'autonomiser l'aidé, et par contrecoup, de remettre en question la hiérarchie sociale. La seconde consiste à proposer des solutions toutes faites au groupe en difficulté. Son objectif est de le maintenir dans une position d'infériorité. Cela signifie que ce type d'aide renforce les relations intergroupes asymétriques.

Il découle de ce qui précède que dans le cas où la hiérarchie intergroupe est perçue comme instable et illégitime, les membres des groupes de statut fort sont fortement motivés à réaffirmer leur position dominante. Cela les prédispose à proposer une aide à orientation dépendante aux membres de l'exogroupe de statut faible. En revanche, ces derniers sont motivés à contester la hiérarchie et sont enclins soit à refuser toute aide, soit à rechercher et à accepter uniquement les aides à orientation autonome. Dans le cas où la hiérarchie intergroupe est perçue comme stable et légitime, les membres des groupes de statut fort tendent à vouloir maintenir leur pouvoir et sont donc enclins à proposer une aide à orientation dépendante aux membres des exogroupes de statut faible. Ces derniers rentrent dans la même logique, en considérant que dans ces conditions, demander et accepter une aide à orientation dépendante est légitime car, comme mentionné plus haut, une situation stable et légitime amène le groupe de statut faible à justifier le système. Cette tendance est plus marquée chez les personnes qui s'identifient fortement à l'endogroupe (Nadler & Halabi, 2006).

Altruisme intergroupe et dominance sociale

La recherche de Halabi et al. (2008) apporte une perspective nouvelle aux fondements théoriques du modèle proposé en 2002 par Nadler : celle de la dominance sociale. La théorie de la dominance sociale est un modèle d'analyse des relations intergroupes qui décrit les sociétés humaines comme des systèmes d'oppression basés sur une structure hiérarchique des groupes. Son concept clé est l'orientation de la

dominance sociale (ODS), définie comme le degré de soutien à la hiérarchie sociale composée de groupes dont certains sont dominants et d'autres dominés (Heaven, Ciarrochi, & Leeson, 2011; Kteily, Sidanius, & Levin, 2011). Elle est liée aux attitudes à l'égard de n'importe quelle idéologie, croyance et politique sociale (Pratto et al., 1994). Elle est également un puissant prédicteur des attitudes et des comportements intergroupes (Ho et al., 2012).

L'étude menée en Israël par Halabi et al. (2008) établit que l'ODS des membres de groupes de statut fort détermine le type d'aide qu'ils ont tendance à proposer aux membres des groupes de statut faible. Concrètement, ces auteurs observent que les membres du groupe de statut fort (des Juifs) qui ont une ODS forte offrent moins d'aide aux membres de l'exogroupe (des Arabes), lorsque le statut de l'endogroupe est menacé. Dans le cas où ils proposent de l'aide, celle-ci est à orientation dépendante. Ceux qui ont une ODS faible présentent des tendances similaires, bien que celles-ci soient moins marquées. Cela signifie qu'ils ont moins tendance à refuser d'aider le groupe ayant un statut faible que leurs homologues ayant une ODS forte, et qu'ils proposent un peu plus souvent une aide à orientation autonome. En somme, cette étude montre que l'altruisme intergroupe est un instrument de dominance sociale. Malheureusement, cette recherche pionnière et les travaux subséquents sur le même sujet (Halabi, Nadler, & Dovidio, 2012; Halabi, Nadler, Dovidio, & Noor, 2010; Mashuri, Zaduqisti, & Yoyon, 2012), ne se préoccupent pas d'analyser la relation entre l'ODS et le type d'aide que recherchent ou acceptent les membres de groupes de statut faible. Or, la recherche de Nadler et Halabi (2006) révèle que l'altruisme intergroupe est analysable du double point de vue des donneurs et des receveurs. La raison en est que dans la dynamique de l'altruisme intergroupe, les différences individuelles et situationnelles affectent aussi bien les premiers que les seconds, comme l'indiquent les postulats de base du modèle révisé de Nadler, Halabi, Harapz-Gorodeisky et Ben-David (2010) : a) en donnant de l'aide à l'exogroupe de statut faible, les membres du groupe de statut fort maintiennent leur distinctivité groupale positive ; b) l'acceptation de l'aide proposée par l'exogroupe de statut fort constitue une acceptation de l'infériorité de l'endogroupe de statut faible ; c) le refus de l'aide proposée par l'exogroupe de statut fort traduit la remise en cause de la hiérarchie sociale et la recherche de l'égalité entre groupes. La lacune théorique ainsi relevée justifie la présente recherche.

ALTRUISME INTERGROUPE ET DOMINANCE

Pour combler la lacune dans la littérature portant sur les liens entre altruisme intergroupe et dominance sociale relevée ci-dessus, on peut s'appuyer sur les travaux d'Overbeck, Jost, Mosso et Flizik (2004). Ceux-ci s'intéressent à l'effet de l'ODS sur l'acceptation ou le refus de l'infériorité chez les membres de groupes de statut faible. Ils révèlent que ceux qui ont une ODS forte s'inscrivent dans la logique de la justification du système en acceptant leur infériorité (Jost, 2001). En revanche, ceux qui ont une ODS faible s'engagent dans la résistance et la compétition sociale, en refusant leur infériorité. On peut rapprocher ces comportements des réactions à l'altruisme intergroupe observées chez les membres de groupes de statut faible, en fonction de la perception de la légitimité et de la stabilité de la hiérarchie intergroupe (Nadler, 2002). Pour rappel, on constate que dans le cas où la hiérarchie intergroupe est perçue comme instable et illégitime, ces individus sont motivés à contester la hiérarchie intergroupe et donc l'infériorité de l'endogroupe. Par conséquent, ils sont enclins soit à refuser toute aide, soit à demander et à accepter uniquement les aides à orientation autonome. En revanche dans le cas où la hiérarchie intergroupe est perçue comme stable et légitime, ils soutiennent les relations intergroupes asymétriques et acceptent l'infériorité de l'endogroupe. Par conséquent, ils ne sont pas réticents à demander et à accepter une aide à orientation dépendante. Le rapprochement de l'observation de Nadler (2002) des conclusions d'Overbeck et al. (2004) suggère qu'il pourrait y avoir un lien l'ODS et la réaction à l'altruisme intergroupe chez les membres des groupes de statut faible. La mise en évidence expérimentale de ce lien constitue ce que la présente recherche veut apporter au modèle de Nadler (2002).

Hypothèse

La présente recherche met à l'épreuve l'hypothèse ci-après : dans la situation de stabilité et d'instabilité de la hiérarchie intergroupe, en accord avec la logique de la justification du système, les participants qui ont une ODS forte acceptent plus d'aide à caractère dépendant de l'exogroupe. En revanche, s'inscrivant dans la logique de contestation de la hiérarchie intergroupe, les participants qui ont une ODS faible sont plus enclins à accepter une aide à orientation autonome ou à refuser toute aide.

Cette hypothèse stipule, contrairement à ce que prétendent Nadler et Halabi (2006), que les comportements des participants seront identiques dans

les situations de stabilité et d'instabilité de la hiérarchie intergroupe quand il y a une faible ODS. Elle indique donc que leurs réactions à l'altruisme intergroupe dépendront de leur soutien ou non à la hiérarchie intergroupe, perceptible grâce à l'ODS. C'est le principal apport théorique de la présente recherche.

Méthode

Participants

Cent élèves des deux sexes (59 filles et 41 garçons) des classes de Première scientifique du Collège Albert Camus de la ville de Dschang (Cameroun), âgés entre 15 et 19 ans ($M = 17$ ans et 3 mois, $E.T. = 1.7$) ont participé à l'expérience. Ils ont été répartis en deux groupes de 50 personnes chacun, suivant les conditions expérimentales. Ils ont tous marqué leur accord pour participer à l'étude.

Procédure expérimentale

L'expérience conduite dans la présente recherche s'inspire de Nadler et Halabi (2006, étude 4). Cette étude exploratoire utilise l'affiliation scolaire comme contexte intergroupe.

Les expérimentateurs sont introduits auprès des participants comme des fonctionnaires du Ministère des Enseignements secondaires du Cameroun ayant pour mission d'évaluer le niveau des élèves des lycées et collèges du pays en mathématiques. L'enseignant qui apporte son concours aux chercheurs explique aux élèves que leur établissement a été choisi parmi les quatre sélectionnés dans leur région, d'où le fait qu'ils devaient se sentir privilégiés de faire partie de cette étude.

La présentation du matériel expérimental se déroule en quatre temps. Tout d'abord, dans la phase 1, on administre la *Social Dominance Orientation Scale* (Pratto et al., 1994). Cette échelle évalue le niveau de soutien des participants à la hiérarchie sociale constituée de groupes dominants et de groupes dominés ($\alpha = .87$). Elle est constituée de 16 affirmations pour lesquelles les participants doivent donner leur opinion sur une échelle de Likert allant de 1 (*fortement en désaccord*) à 7 (*fortement en accord*). Huit d'entre elles sont recodées. À titre d'exemple, l'item 9, codé à l'endroit, est formulé comme suit : « *Some groups of people are simply inferior to other*

groups » (littéralement: certains groupes d'individus sont simplement inférieurs aux autres). En revanche, l'item 8, recodé, affirme ce qui suit : « *Not one group should dominate society* » (littéralement : aucun groupe ne devrait dominer la société). Il faut préciser que dans la présente recherche l'ODS est utilisée comme variable catégorielle.

Ensuite, dans la phase 2, on remet aux participants un document présentant des statistiques d'admission aux examens officiels (Brevet d'Études du Premier Cycle de l'enseignement secondaire, Certificat de Probation et Baccalauréat) de la période 2008-2012. Celles-ci comparent les taux de succès enregistrés par leur établissement et le Lycée classique de Dschang. Ces chiffres fictifs, mais qui reflètent la réalité, indiquent que les résultats des élèves du Lycée classique sont meilleurs que ceux de leurs homologues du Collège Albert Camus. Cette information introduit des relations intergroupes asymétriques, puisque l'une des deux entités a un statut supérieur à l'autre. En accord avec le modèle de Nadler (2002), ces relations asymétriques se situent dans un contexte de stabilité ou d'instabilité de la hiérarchie intergroupe. La manipulation de cette variable est faite comme suit: dans la condition stabilité des statuts, les statistiques montrent qu'au cours des 5 dernières années, sans discontinuité, les élèves du Lycée classique ont été meilleurs que ceux du Collège Albert Camus à tous les examens officiels organisés par le Ministère. Dans la condition instabilité des statuts, les statistiques indiquent que la suprématie du Lycée classique est discontinue, puisque sur cinq sessions d'exams, les élèves de cet établissement scolaire n'ont été meilleurs que leurs homologues du Collège Albert Camus que sur trois sessions (2008, 2009 et 2012). En revanche, ces derniers se sont mieux comportés que leurs

homologues du Lycée classique sur deux sessions (2010 et 2011). De même, les projections statistiques présentées aux participants laissaient croire que dans un futur proche, la hiérarchie intergroupe pourrait être renversée. Une question leur est posée pour vérifier, dans chaque cas, s'ils perçoivent l'asymétrie de statuts comme stable ou instable. On observe que dans la première situation, 84% d'entre eux estiment que la hiérarchie intergroupe est stable, tandis que dans la seconde, ils sont 96% à la considérer instable.

Le troisième phase de l'expérience consiste à soumettre aux participants des exercices de mathématiques à résoudre. Il y en a cinq, confectionnés avec l'aide de leur enseignant. Trois de ces exercices sont insolubles, tandis que les deux autres sont faciles. Le choix d'exercices insolubles est lié au fait que pour les besoins de la phase 4 de l'expérimentation, il était nécessaire que les participants soient en situation d'échec. La seule manière de s'en assurer était de donner des exercices qu'ils ne pouvaient résoudre, quelles que soient leurs aptitudes en mathématiques.

Le constat d'échec des participants à certains exercices de la phase 3 de l'expérimentation est un prétexte pour introduire la phase 4 : la réaction à l'altruisme de l'exogroupe. Ainsi, on informe les participants que des élèves du Lycée classique (exogroupe de statut fort) se portent volontaires pour leur apporter de l'aide pour résoudre lesdits exercices, s'ils en expriment le besoin. Ils doivent simplement choisir l'une des modalités ci-après : a) recevoir la solution au problème (aide à orientation dépendante) ; b) recevoir un conseil pratique relatif à la résolution de ce type d'exercice (aide à orientation autonome) ou ; c) ne recevoir aucune assistance (refus de toute aide).

Tableau 1

Répartition des participants en fonction du type d'aide sollicitée dans la situation de stabilité de la hiérarchie intergroupe

Aide sollicitée	Participants avec orientation de la dominance sociale forte	Participants avec orientation de la dominance sociale faible	Résidus standardisés	Total
1. À orientation dépendante	9 (56,25%)	2 (5,90%)	2.38	11 (22,00%)
2. À orientation autonome	5 (31,25%)	25 (73,52%)	2.57	30 (60,00%)
3. Aucune	2 (12,50%)	7 (20,58%)	1.97	9 (18,00%)
4. Total	16 (32,00%)	34 (68,00%)	-	50 (100,00%)

Note. $\chi^2 = 16.15, p < .05$.

Résultats

Les données collectées à l'issue de l'expérimentation sont présentées dans les tableaux 1 et 2, en fonction des conditions expérimentales.

Les données présentées dans le tableau 1 indiquent que dans la situation de stabilité de la hiérarchie intergroupe, la majorité des participants qui ont une ODS forte préfèrent recevoir une aide à orientation dépendante (56,25%). Seuls 31,25% d'entre eux choisissent une aide à orientation autonome, tandis que 12,50% ne veulent recevoir aucune assistance. En revanche, les participants qui ont une ODS faible demandent plus souvent une aide à orientation autonome (73,52%). De même, 5,90% d'entre eux préfèrent une aide à orientation dépendante, tandis que 20,58% ne sollicitent pas d'aide. Ces résultats qui indiquent que pour les aides à orientation dépendante (résidu standardisé = 2,38) ou autonome (résidu standardisé = 2,57), le choix des participants varie en fonction de leur ODS. C'est aussi le cas pour le refus de toute assistance (résidu standardisé = 1,97). Ces observations indiquent que dans la situation de stabilité de la hiérarchie intergroupe, l'ODS semble influencer la réaction à l'altruisme de l'exogroupe de statut fort apportent un soutien à l'hypothèse de l'étude ($\chi^2(1, 50) = 16.15, p < .05$).

Le tableau 2 révèle que dans la situation d'instabilité de la hiérarchie intergroupe, les participants qui ont une ODS forte sont plus enclins à accepter une aide à orientation dépendante (57,14%) que leurs homologues qui ont une ODS faible (0%). L'acceptation de ce type d'aide varie en fonction de

l'ODS (résidu standardisé = 2,41). Il en est de même pour le choix de l'aide à orientation autonome. En effet, on observe que les participants qui ont une ODS faible sont plus enclins à l'accepter (68,97%) que ceux qui ont une ODS forte (38,09%; résidu standardisé = 2,39). La même tendance est relevée chez les participants qui refusent toute assistance où on dénombre plus de personnes ayant une ODS faible (31,03%) que d'individus avec une ODS forte (4,77%; résidu standardisé = 1,97). Les données collectées indiquent que dans la situation d'instabilité de la hiérarchie intergroupe, l'ODS des participants semble influencer leur réaction à l'altruisme de l'exogroupe de statut fort ($\chi^2(2, 50) = 22.16, p < .05$). Elles soutiennent également l'hypothèse mise à l'épreuve.

Discussion

L'hypothèse mise à l'épreuve dans la présente recherche est formulée comme suit : dans la situation de stabilité et d'instabilité de la hiérarchie intergroupe, en accord avec la logique de la justification du système, les participants qui ont une ODS forte acceptent plus d'aide à caractère dépendant de l'exogroupe. En revanche, s'inscrivant dans la logique de contestation de la hiérarchie intergroupe, les participants qui ont une ODS faible sont plus enclins à accepter une aide à orientation autonome ou à refuser toute aide. Les données collectées à l'issue de l'expérimentation confirment cette prédiction. En effet, il découle des observations faites que dans un contexte de relations intergroupes asymétriques, la réaction à l'altruisme d'un exogroupe de statut fort dépend de l'ODS des membres du groupe de statut faible, dans une situation où la hiérarchie intergroupe

Tableau 2

Répartition des participants en fonction du type d'aide sollicitée dans la situation d'instabilité de la hiérarchie intergroupe

Aide sollicitée	Participants avec orientation de la dominance sociale forte	Participants avec orientation de la dominance sociale faible	Résidus standardisés	Total
1. À orientation dépendante	12 (57,14%)	0 (0,00%)	2,41	12 (24,00%)
2. À orientation autonome	8 (38,09%)	20 (68,97%)	2,39	28 (56,00%)
3. Aucune	1 (4,77%)	9 (31,03%)	2,38	10 (20,00%)
4. Total	21 (42,00%)	29 (58,00%)	-	50(100,00%)

Note. $\chi^2 = 22.16, p < .05$.

est stable ou instable. En effet, les participants qui ont une ODS forte préfèrent une aide à orientation dépendante dans les situations de stabilité et d'instabilité de la hiérarchie, tandis que leurs homologues qui ont une ODS faible sont plus enclins à solliciter une aide à orientation autonome dans les deux situations. Dans la même logique, les participants qui ont une ODS faible sont plus susceptibles de refuser toute assistance que leurs homologues qui ont une ODS forte, quelle que soit la situation de la hiérarchie intergroupe.

Au plan théorique, les résultats de la présente recherche appuient l'idée que l'ODS influence les attitudes et les comportements, dont les réactions à l'altruisme intergroupe (Sibley & Duckitt, 2009; Thomsen et al., 2010). En effet, les observations faites sur des membres d'un groupe de statut faible indiquent que leurs réactions à l'altruisme d'un exogroupe dominant dépendent de leur soutien à la hiérarchie intergroupe. Dans les faits, ceux d'entre eux qui ont une ODS forte marquent leur préférence pour une aide à orientation dépendante. Ce comportement est similaire à celui des membres des groupes de statut fort qui ont également une ODS forte, qui proposent préférentiellement une aide à orientation dépendante. Il s'explique par le fait que ces individus qui diffèrent les uns des autres par le statut de leurs groupes respectifs se ressemblent cependant du point de vue de leur soutien aux relations intergroupes asymétriques. En effet, la théorie de la dominance sociale établit que les individus qui ont une ODS forte sont favorables au maintien, voire à l'accentuation de la hiérarchie sociale constituée de groupes dominants et de groupes dominés (Morrison & Ybarra, 2008; Unzueta, Knowles, & Ho, 2012). Or, solliciter une aide à caractère dépendant constitue un moyen de maintenir l'asymétrie des relations de pouvoir et de statuts entre les groupes, puisque le groupe bénéficiaire de l'assistance du groupe dominant ne recherche pas son autonomie, bien au contraire.

La préférence des membres de groupes de statut faible ayant une ODS forte pour une aide à orientation dépendante peut également se comprendre dans la perspective de la théorie de la justification du système. Celle-ci postule que les membres de groupes de statut faible peuvent justifier le statu quo et légitimer l'ordre social établi (Jost et al., 2005). Ce faisant, ils se situent dans la logique de la justification des relations intergroupes asymétriques. Dans cette perspective, il apparaît logique qu'ils préfèrent solliciter une aide qui les maintient en situation de dépendance vis-à-vis de l'exogroupe de statut fort (Nadler et al., 2010).

Les données collectées par Halabi et al. (2008) indiquent que les membres de groupes de statut fort qui ont une ODS faible proposent un peu plus souvent une aide à orientation autonome que leurs congénères qui ont une ODS forte. Les observations faites dans la présente recherche sur les membres d'un groupe de statut faible confirment fortement cette tendance. Bien plus, ces personnes n'hésitent pas à refuser l'aide qui leur est proposée. Elles sont donc en accord avec le troisième postulat du modèle révisé de Nadler et al. (2010) : en refusant de rechercher ou d'accepter l'aide de l'exogroupe, les membres de groupes de statut faible remettent en cause les inégalités sociales existantes. Ce refus de la dépendance à l'égard du groupe de statut fort est l'expression de la motivation à rechercher l'égalité avec l'exogroupe. Il est conforme à la caractéristique principale des individus qui ont une ODS faible. En effet, pour eux, l'acceptation d'une aide à orientation dépendante n'est pas satisfaisante, parce que ce type d'assistance amène à percevoir le récepteur comme une personne relativement faible, incapable et dépendante du donateur. *A contrario*, l'aide à orientation autonome lui permet de garder le contrôle, et une large indépendance vis-à-vis du donateur. De plus, elle ne constitue pas une menace pour son identité sociale (Nadler & Halabi, 2006).

La réaction des participants ayant une ODS faible à l'altruisme de l'exogroupe de statut fort peut se comprendre par leur refus de l'infériorité de l'endogroupe (Overbeck et al., 2004). En effet, selon le second postulat du modèle révisé de Nadler et al. (2010), l'acceptation de l'aide proposée par l'exogroupe de statut fort constitue une acceptation de l'infériorité de l'endogroupe de statut faible. Cela signifie que la seule manière pour un groupe de statut faible d'affirmer son indépendance et son désir d'entretenir des relations intergroupes symétriques avec le groupe de statut fort est de refuser l'aide proposée ou de n'accepter qu'une aide à orientation autonome. Dans la présente recherche, cela est particulièrement perceptible dans la situation expérimentale où la hiérarchie intergroupe est instable (voir tableau 2). Cette observation appuie l'idée que lorsque la hiérarchie intergroupe est perçue comme instable, les membres des groupes de statut faible sont motivés à la contester. Par conséquent, ils sont enclins soit à refuser toute aide, soit à rechercher et à accepter uniquement les aides à orientation autonome (Nadler, 2002).

ALTRUISME INTERGROUPE ET DOMINANCE

Au final, la présente recherche soutient l'idée que l'altruisme intergroupe est un instrument au service de la dominance sociale (Nadler, 2002; Mashuri et al., 2012). Son apport théorique réside dans le fait qu'elle établit le lien entre l'ODS et la réaction à l'altruisme d'un exogroupe de statut fort chez les membres des groupes de statut faible. Ainsi, elle comble une lacune du modèle de Nadler, qui s'en est tenu à la mise en évidence expérimentale de ce lien chez les membres de groupes de statut fort. Le constat qu'on peut faire est que les réactions à l'altruisme intergroupe des membres des groupes de statut fort ou de statut faible sont à peu près similaires lorsqu'ils ont le même niveau d'acceptation de la hiérarchie intergroupe (ODS). Ainsi, ceux qui adhèrent aux mythes légitimiseurs, qui accentuent la hiérarchie sociale tel que l'ODS, préfèrent donner ou recevoir une aide à orientation dépendante, puisque celle-ci maintient, voire accentue les relations intergroupes asymétriques. En revanche, ceux qui adhèrent aux mythes légitimiseurs qui atténuent les inégalités intergroupes (ODS faible) sont plus enclins à proposer ou à accepter une aide à orientation autonome, qui promeut l'égalité entre les groupes. Outre le lien établi entre ODS et réaction à l'altruisme d'un exogroupe dominant chez les membres des groupes de statut faible, l'un des résultats majeurs de cette étude est que les réactions des participants sont identiques, quelle que soit la stabilité de la hiérarchie intergroupe. Cette observation contredit les données expérimentales existantes (Nadler & Halabi, 2006).

Limites

La première limite de cette étude est liée à son caractère exploratoire que révèlent les analyses statistiques pour mettre à l'épreuve l'hypothèse émise. Ses résultats sont également limités, en raison du fait que certaines variables susceptibles d'influencer les réactions à l'altruisme de l'exogroupe n'ont pas été contrôlées dans le protocole expérimental. Dans cette perspective, on peut évoquer tout d'abord le rôle de l'identification des participants à leur groupe d'appartenance. Cette variable est mise en lumière dans l'étude de Nadler et Halabi (2006). Ces auteurs montrent que la réaction à l'altruisme intergroupe dépend de la menace que celui-ci génère sur l'identité sociale des individus. Cette tendance est plus souvent observée chez les personnes qui s'identifient fortement à l'endogroupe. Ensuite, on peut citer l'auto-évaluation des participants. Ce facteur est évoqué dans les travaux de Koehrsen (2004), qui révèlent que si l'auto-évaluation et l'évaluation du groupe sont

généralement symétriques au sein des groupes de statut fort, ce n'est pas toujours le cas dans les groupes de statut faible. Il en découle qu'une évaluation négative du groupe peut être associée à une auto-évaluation positive. Dans cette perspective, on peut se demander si les participants n'ont pas réagi à l'altruisme de l'exogroupe de statut fort en fonction de leur perception de leurs propres capacités en mathématiques. Dans cette logique, la question est de savoir si un élève qui se considère comme une personne douée en mathématiques est susceptible d'accepter une aide à orientation dépendante, même si son ODS est forte. Cette recherche ne peut répondre à cette question pour laquelle une investigation supplémentaire est nécessaire.

Orientations futures

Nadler (2002) circonscrit la sphère explicative de son modèle aux relations intergroupes asymétriques, comme si des relations de pouvoir et de dominance ne peuvent exister qu'entre des groupes de statut fort et des groupes de statut faible. Or, comme le montre la concurrence entre États-Unis et URSS pendant la période de la Guerre Froide, des groupes de statuts symétriques peuvent entretenir des relations de dominance, dans le but de déterminer lequel est le plus fort. Dans cette logique, on peut mener des travaux pour savoir si le modèle que propose cet auteur est valable dans les cas où les relations intergroupes sont symétriques. De même, dans la perspective de la recherche de Fokou Dchoune, Ebalé Moneze, Messanga et Dzuetszo Mouafou (2012), qui indiquent que la réversibilité du statut de l'endogroupe génère une fluctuation de l'identification sociale de ses membres, on peut conduire une étude pour savoir si ce facteur peut affecter la réaction à l'altruisme d'un exogroupe. Concrètement, il s'agirait de savoir quel est le type d'aide que des individus appartenant à un groupe dont le statut est passé de fort à faible sont susceptibles d'accepter de la part des membres d'un exogroupe dont le statut est passé de faible à fort.

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The Moderating Role of Oxytocin in the Relationship between Intergroup Bias and Disgust

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Existing literature suggests that the human disgust response is susceptible to intergroup bias effects; that is, a disgusting stimulus evoked by an out-group member might cause greater perceived disgust than that from an in-group member. The following theoretical paper expands upon an idea explored previously by Kavaliers and Choleris (2013) and proposes that the effects of intergroup bias on the disgust response is moderated by the neuropeptide oxytocin, which has been shown to be associated with social recognition activities such as in-group favoritism/out-group derogation. Achieving a better understanding of the role of oxytocin in moderating effects of intergroup bias may reveal interesting consequences of interpersonal relations on physiological well-being and its behavioral determinants.

Keywords: oxytocin, intergroup bias, disgust, social recognition, disease avoidance

Des études récentes suggèrent que chez l'humain, la réponse de dégoût est influencée par les effets des biais endogroupe et exogroupe. En d'autres mots, un stimulus dégoûtant produit par un membre d'un exogroupe pourrait être perçu comme étant plus dégoûtant que s'il avait été produit par un membre de l'endogroupe. Ce présent article développe une idée étudiée par Kavaliers et Choleris (2013) et suggère que l'effet du biais intergroupe sur la réponse de dégoût est modérée par l'oxytocine, un neuropeptide qui a été associé à des activités de reconnaissance sociale tel le biais pro endogroupe et la dérogation de l'exogroupe. Une meilleure compréhension du rôle modérateur de l'oxytocine dans les effets du biais intergroupe pourrait révéler les effets des relations interpersonnelles sur le bien-être physiologique et ses déterminants comportementaux.

Mots-clés : oxytocine, biais intergroupe, dégoût, reconnaissance sociale, évitement des maladies

Research has demonstrated that intergroup bias affects the human disgust response. It has been found that people perceive a greater degree of disgust towards individuals whom they consider to be members of an out-group than they perceive towards individuals whom they consider to be members of an in-group (Oaten, Stevenson, & Case, 2009). Empirical data from the late 1990s found that disgust is heightened by bias towards an out-group, as

Schiefenhövel (1997) discovered that ethnic out-groups often instigated disgust reactions from people (Oaten et al., 2009). Furthermore, social behaviors associated with out-group bias, such as ethnocentrism and prejudice, are associated with greater levels of disgust (Kavaliers & Choleris, 2011; Schaller & Murray, 2008). On the other hand, researchers have found that a disgusting stimulus is rated as less disgusting when invoked by an in-group member (Oaten et al., 2009).

Following attempts to unravel the relationship between intergroup bias (a social influence) and disgust (a physiological response), the mammalian neuropeptide oxytocin has emerged as a molecule that

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links the two variables. Past experiments conducted by Martin Kavaliers and Elena Choleris (2013), experts on the neuropeptides oxytocin and its structural analogue arginine vasopressin, has revealed that oxytocin plays an important role in the processing of intergroup bias. The studies both conducted and compiled by Kavaliers and Choleris (2013) underscore significant evidential support for the idea that oxytocin plays a very important role in social recognition. These two experts have traced the ability to identify social cues to the recognition and processing of odors; additionally, they have elaborated on the importance of being conscious of odor cues for distinguishing normal from diseased mates in sexual selection processes. Furthermore, they have conducted experiments that support the role of oxytocin as a molecule that functions in processing social stimuli in the context of disease transmission, in which disgust may manifest.

While social neuroscientists have ascertained intergroup bias as a source of influence on the human disgust response, this model possesses significant limits: The mechanism by which the strength of the relationship between intergroup bias and disgust may be altered remains unknown. Past work on oxytocin has insinuated that oxytocin mediates the effects of intergroup bias on disgust because of its importance in processing social cues; in functioning as a mediator, oxytocin would serve to justify the presence of the disgust response that result from varying levels of intergroup bias. However, the following theoretical article proposes that oxytocin serves as a moderator in the relationship between disgust and intergroup bias. As a moderator, oxytocin accentuates the effects of intergroup bias on disgust, rendering the relationship between these two variables stronger. Oxytocin possibly serves as a moderator via a central neuroendocrine mechanism that merits further empirical exploration. In the present article, the rationale underlying oxytocin's moderating role will be addressed. There will also be description of the central neuroendocrine mechanism by which oxytocin may moderate the effects of intergroup bias on disgust, which includes oxytocin signaling and genetic predisposition, both of which may yield either a stronger or weaker level of perceived disgust towards a social stimulus. Finally, experiments that would further validate the proposed role of oxytocin as a moderator between intergroup bias and disgust will be suggested.

Disgust as a Universal Emotion that Arises from Disease Avoidance

Disgust is defined as “a feeling of revulsion, sometimes accompanied by nausea, along with a strong desire to withdraw from the eliciting stimulus” (Oaten et al., 2009, p. 303) and may refer to distaste in various domains. In the present article, the disgust to be addressed arises from the possibility of interacting with a negative health consequence; this form of disgust is classified as “pathogen disgust” (Tybur, Lieberman, & Griskevicius, 2009). Other forms of disgust (such as sexual disgust or moral disgust) would be those that are evoked by aberrations of typical and socially acceptable expectations; neither of these forms of disgust will be discussed. Pathogen disgust, hereby referred to as “disgust,” may be generated from unhygienic situations such as inappropriate preparation of food, uncleanliness in public domains (such as feces remaining from the previous occupant in a public toilet), infected open wounds, and airborne transmission of microbes (Curtis, 2007).

The disgust response is distinctly identifiable; the first action characterizing disgust includes strong withdrawal from negative stimuli. Following this strong initial response, humans engage in other characterizable actions as part of the disgust response mechanism, both behavioral and physiological in nature (Oaten et al., 2009). The behavioral responses employed by humans include visibility of the tongue as it emerges from the mouth, narrowing of the brows, a wrinkled nose, and a curled upper lip (Rozin, Lowery, & Ebert, 1994). The physiological responses employed by humans (generated by the autonomic nervous system) include reduced blood pressure, among other cardiac measures, as well as decreased skin conductance (Stark, Walter, Schienle, & Vaitl, 2005). The human disgust response varies among individuals with regard to actions that can be controlled (e.g., facial expression) but appears consistent across physiological measures outside of one’s control. Moreover, since the disgust response is considered normative in individuals, it may be generated experimentally from specific images organized by the International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 2008) that are intended to convey pathogen disgust. Such images include insects on food, an eye tumor, and mutilation of faces (Lang et al., 2008). The human disgust response’s frequency, recognizable nature, and concurrence with the aforementioned behavioral and

physiological symptoms have rendered disgust a subject of extensive study.

Disgust responses to stimuli vary depending on the relationship between the stimulus or individual eliciting the stimulus and the individual perceiving this stimulus and generating a response. It is believed that the disgust response depends upon group bias, with individuals demonstrating varying levels of disgust for members of an in-group (a group with which one identifies) and an out-group (a group with which one does not identify; Oaten et al., 2009).

Variation in the Disgust Response Caused by Intergroup Biases

Experiments studying the disgust response have demonstrated that the amount of disgust experienced by an individual depends of the relationship that exists between the individual and the disgusting stimulus perceived. Specifically, these studies have provided evidence that a disgusting stimulus evoked by an in-group member yields less perceived disgust as compared to an out-group member eliciting the same disgusting stimulus. For example, an experiment conducted by Case, Repacholi, and Stevenson (2006) found that mothers exposed to their own baby's soiled diaper rated it as less disgusting as compared to the soiled diaper of somebody else's baby during blind trials, in which the mother was asked to sample diapers without knowing which diaper belonged to her child. Additionally, mothers rated the smell of their own baby's soiled diaper less disgusting as compared to the soiled diaper of another child (Case et al., 2006). These findings demonstrate that, even when mothers were not made aware that they had smelled feces from their own child, they experienced less disgust when confronted with a disgusting stimulus from their own child than when confronted with a disgusting stimulus from the child of a stranger or an out-group member.

Other studies looking at the disgust response found that negative affect increased in individuals when a body odor (in the form of feces, sweat, flatulence, etc.) derived from a stranger rather than from oneself (Stevenson & Repacholi, 2005) and that individuals considered body fluids more disgusting when emitted by strangers than when emitted by a close relative (Curtis, Aunger, & Rabie, 2004). Curtis et al. (2004) asked participants to identify the individuals with whom they would feel the greatest disgust from sharing their toothbrush. This study found that the

amount of disgust perceived by sharing a toothbrush (and hence spreading germs) decreased as the relationship between the individuals sharing the toothbrush transitioned from out-group members to in-group members. While 59% of individuals identified their post officer as an individual with whom they would refrain most from sharing their toothbrush, only 24.7% of individuals identified their "boss at work." The likelihood of feeling disgust decreased when individuals were considered members of their in-group, such as family and friends, with only 3.3% of participants indicating "a sibling," 1.9% of participants indicating "a best friend," and 1.8% of participants indicating "a partner/spouse" as someone with whom they would dislike sharing a toothbrush (Curtis et al., 2004; Oaten et al., 2009). Based on these results, research on disgust responses has found that in -group favoritism predicts the extent to which individuals perceive a stimulus as disgusting.

The important role played by intergroup bias derives from ancestral environments; in their discussion of disgust, Oaten et al. (2009) pointed out that interacting with an in-group member would inherently pose less risk of infection because outsiders may introduce infectious agents to a population lacking immunity, whereas an in-group member would not. Thus, the evolutionary roots of out-group bias exist alongside those of disease avoidance; based on these behavioral tendencies that carry over from ancestral environments, individuals avoid communicable diseases through disgust (Faulkner, Schaller, Park, & Duncan, 2004) because disgust allows individuals to physically separate themselves from others (Rozin, Haidt, & McCauley, 2000). Therefore, social behavior may have been birthed from wariness of disease transmission. To supplement this disease avoidance rationale for intergroup bias, Rozin and colleagues (2000) point out that any form of contact with out-group members rendered unwelcome can be categorized as a form of interpersonal contamination from a social standpoint. This historically founded belief stemming from avoidance of disease transmission possibly fuels the presence of intergroup bias among modern societies today.

The effects of intergroup bias on disgust have also been studied in ethnic contexts, with individuals believing that increased contact with ethnic out-group members increases the likelihood of disease transmission. Members of foreign out-groups have been compared to animals associated with disease

transmission; such creatures include cockroaches, rats, maggots, lice, and flies (Suedfeld & Schaller, 2002). Ethnic out-group members have also been faulted for disease outbreaks; consequently, genocide perpetrators engage in “ethnic cleansing” that follows a disease model, as indicated by the usage of terms like “Jewish vermin” or “Tutsi cockroaches” (Navarette & Fessler, 2007). Faulkner et al. (2004) demonstrated that chronically elevated levels of concern about disease transmission caused negative reactions toward individuals of a different nationality, which resulted in xenophobia, or a fear of foreigners.

Because of the importance of ethnic contexts in analyzing perceived disgust, various experiments examining the effects of in-group and out-group biases have sought to study participants’ reactions to stimuli associated with a variety of races. Overall, researchers have used the term “source effect” to describe their findings that disgust is evoked to a greater extent by strangers (out-group members) than by family, friends, or oneself (in-group members; Case et al., 2006; Stevenson & Repacholi, 2005). Oaten et al. (2009) have provided support for the source effect in their detailed account of disgust as a disease-avoidance mechanism. To explain the link that exists between the external social cue of intergroup bias and the normative reaction of the human disgust response, existing social neuroscience literature has targeted the neuropeptide oxytocin.

Oxytocin, Intergroup Bias, and Disgust

Oxytocin is a mammalian neuropeptide hormone secreted by the posterior pituitary gland to perform neuromodulatory functions; it is known for physiologically inducing uterine contractions, which are important for dilation of the cervix prior to birth (Wiqvist, Norström, & Wiqvist, 1984). Oxytocin carries an interesting history as it was, up until recently, colloquially regarded as a “love hormone” because it was thought to promote intimacy and bonding (Magon & Kalra, 2011). However, recent research now reveals that oxytocin functions in social recognition outside of merely prosocial tendencies. Oxytocin is a neuropeptide that is best known for its social role in non-human primates and other mammals; in rats, oxytocin plays a role in social recognition, maternal behaviors, pair bonding, and affiliation (Donaldson & Young, 2008). However, oxytocin has also been shown in experiments to play a role in-group favoritism in humans (Schaller & Murray, 2008; De Dreu, Greer, Van Kleef, Shalvi, &

Handgraaf, 2011). Increases in oxytocin have been directly linked to in-group favoritism as evidenced by self-report measures before and after the administration of intranasal oxytocin (De Dreu et al., 2011). Moreover, Kavaliers and Choleris (2011) found that intranasal administration of oxytocin facilitates recognition of words pertaining to relationships in humans (Unkelbach, Guastella, &Forgas, 2008), illustrating the role of oxytocin in social recognition and ostensibly in processing in-group and out-group cues. Additionally, intranasal oxytocin has increased perceived trustworthiness in faces for social stimuli but not for non-social stimuli (Theodoridou, Rowe, Penton-Voak, & Rogers, 2009), enhanced cooperation in financial games involving a partner (Kosfeld, Heinrichs, Zak, Fischbacher, & Fehr, 2005), and induced feeling of familiarity in affiliative social stimuli such as images of people smiling (Guastella, Mitchell, & Mathews, 2008). These findings indicate that oxytocin boosts feelings of trust and familiarity in the context of interpersonal behaviors.

Overall, the numerous social behaviors associated with oxytocin that allow for intergroup bias to manifest may be classified in various categories, including political attitudes, assortative behaviors (defined as behaviors involving the desire to mingle with others who are similar in genotype and/or phenotype, such as mating), and introversion/extraversion. In some psychology experiments, oxytocin caused prejudice (preconceived notions of others that are not founded in experience) and ethnocentrism (the tendency to view one’s in-group as superior to others), both of which serve as manifestations of in-group favoritism (De Dreu et al., 2011). High oxytocin levels occur in mothers during their first trimester of pregnancy, a period that marks the time during which they remain most susceptible to infection; additionally, these women simultaneously demonstrate accentuated levels of ethnocentrism (Navarette & Fessler, 2007). While oxytocin enhances in-group favoritism, to a lesser extent, it has also been shown by studies to promote out-group derogation (De Dreu et al., 2011).

Based on these studies, researchers previously believed that oxytocin linked the effect of intergroup bias on the disgust response. In experiments with rodents, the oxytocin receptor gene has been knocked out (which signifies removing the receptor), and studies following this methodology have demonstrated that rodents lacking the oxytocin receptor cannot recognize familiar individuals, or in-group members

(Kavaliers & Choleris, 2011). In this way, these researchers classified oxytocin as a mediator of the relationship between intergroup bias and disgust, that is, a variable that serves to explain the link between the two variables. Kavaliers and Choleris (2013) have proposed that oxytocin enables social recognition, which has allowed for oxytocin to emerge as a candidate that explains the direct link between the effects of intergroup bias on perceived disgust. However, the mediation model does not clearly delineate oxytocin's role in mediating the specific relationship between intergroup bias and disgust. While these researchers' work conclusively identifies oxytocin as an important molecule in social recognition, such studies have only examined the role of oxytocin in disease avoidance. These experiments have not yielded definitive evidence to suggest that the effects of oxytocin impact the disgust response itself, especially because this research is limited to animal models such as rats. For example, rodent studies revealed that female rodents tended to avoid infected males based on the effects of oxytocin; however, these studies did not directly study disgust responses and were limited to sexual interactions in rats as opposed to situations of intergroup bias.

Furthermore, while oxytocin has been shown to play a role in social recognition, its role in affecting the strength of the relationship between intergroup bias and disgust has not yet been addressed in research efforts. This article proposes that oxytocin moderates the effects of intergroup bias on disgust; in other words, an increase in oxytocin levels and oxytocin signaling would strengthen the relationship between intergroup bias and disgust. Oxytocin exerts its effects on the body via various mechanisms, and its biological variability within the human body could explain how a single disgusting stimulus may be interpreted differently among various types of relationships.

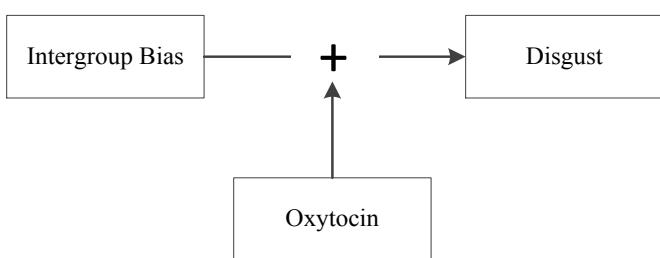


Figure 1. Oxytocin as a moderator of intergroup bias on disgust.

Oxytocin as the Proposed Moderator Between Intergroup Bias and Disgust

While past research has noted the relationship between intergroup bias and disgust, this model is limited because it is unclear how this relationship may be made stronger or weaker. The present article proposes that oxytocin serves as a moderator between intergroup bias and disgust (see Figure 1). Whereas the mediation model described by past researchers would suggest that oxytocin merely serves to account for the influence of intergroup bias (an external social phenomenon) on the disgust response (a physiological reaction), the moderation model proposed here suggests that oxytocin influences the strength of the relationship between intergroup bias and disgust. More specifically, intergroup bias is tied to perceived disgust, strongly in the presence of higher levels of oxytocin or oxytocin signaling. It is believed that oxytocin serves as a moderator of the relationship between intergroup bias and disgust because its effects may yield a wide range of disgust responses for a particular stimulus. This may be due to many reasons, including variations in oxytocin signaling, an individual's genetically predetermined oxytocin receptor type, and the presence of dense populations of oxytocin receptors in areas of the brain.

It is plausible that oxytocin moderates the relationship between intergroup bias and disgust: As oxytocin signaling occurs in numerous different ways, the magnitude of oxytocin's effects may directly influence the degree to which intergroup bias affects disgust. The exact mechanism by which oxytocin moderates the effects of intergroup bias on disgust remains unclear; however, the effects of oxytocin on moderating the human disgust response occur through various processes within the body, and one such process is cell signaling via a central neuroendocrine pathway.

It has been suggested by Kavaliers and Choleris (2013) that oxytocin's function within the aforementioned central neuroendocrine pathway may largely relate to odor cues. Odor-based social recognition in non-human mammalian models has been associated with other molecules expressed within the body: the major histocompatibility complex (MHC), defined as "a large cluster of polymorphic genes coding for the molecules involved in the adaptive (as opposed to the innate) immune response" (Kavaliers & Choleris, 2013, p. 258; see also Milinski, 2006) and major urinary proteins

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(MUPs), which function in social and individual recognition and are often found in the salivary and lachrymal glands (Hurst & Beynon, 2004; Kavaliers & Choleris, 2013).

Relationships functioning endogenously (within the body) at a molecular level frequently involve numerous signaling cascades that are initiated or perpetuated by the binding of ligands to receptors. The central neuroendocrine mechanism supported by Kavaliers and Choleris (2013) would involve a signaling cascade with broad effects throughout the body, which emphasizes oxytocin's endogenous role as a systemically circulating molecule and may explain the versatility of oxytocin in social recognition and behavior. As with other neuropeptides and hormones in the body, there is a direct relationship between increased oxytocin signaling and oxytocin function. Enhanced release of oxytocin leads to larger amounts of oxytocin binding to oxytocin receptors, which leads to oxytocin exerting its effects on the body to a greater extent. Based on this direct relationship, it is reasonable that enhanced oxytocin signaling serves to strengthen the processing of social stimuli and thereby strengthen the relationship between intergroup bias and disgust.

Furthermore, the molecular basis of oxytocin's endogenous function in social recognition supports oxytocin's role as a moderating variable, as it sheds light upon oxytocin signaling as a critical point for interaction between genetic makeup and social influence. While oxytocin has played a role in social interactions through its administration exogenously in laboratory experiments, oxytocin affects in-group favoritism, sociality, and immunity endogenously via oxytocin signaling. The oxytocin receptor maintains three different single nucleotide polymorphisms (DNA sequence variations between humans) on rs53576 in intron 3: A/G, A/A, or G/G (Rodrigues, Saslow, Garcia, John, & Keltner, 2009).

The oxytocin receptor for the first two polymorphism types is considered "asocial" because individuals containing an adenine base for this polymorphism demonstrate lower levels of sociality. Conversely, the oxytocin receptor for the third polymorphism type (G/G homozygosity) is considered "prosocial" because individuals containing two guanine bases demonstrate higher levels of sociality (Rodrigues et al., 2009). Genetic polymorphisms for the oxytocin receptor directly indicate variations in the magnitude of the disgust response's range of

expression; people who possess the asocial oxytocin receptor type are thought to exhibit disgust responses that are less susceptible to social influence as compared to people who possess the social receptor type. Therefore, individuals possessing the social oxytocin receptor type tend to exhibit larger variations in their disgust response as they are more susceptible to social influence on the whole.

Another mechanism by which oxytocin may moderate the effects of social influence on the human disgust response is at the level of specific brain regions. Work conducted by Norman and colleagues (2010) suggests that oxytocin selectively influences processing of threatening stimuli through a pathway that involves the amygdala. Norman and colleagues (2010) describe oxytocin as "rapidly processed through a subcortical pathway that allows for immediate emotional responses that tend to promote defensive behaviors" (p. 1317). If the threat of disease transmission were to be processed as a threatening social stimulus, then oxytocin might also be functioning through the mesolimbic reward pathway that promotes the reward associated with social behavior (Norman et al., 2010; Ross, et al., 2009; Insel & Young, 2001). Consequently, oxytocin may be acting upon the central amygdala, which is densely populated with oxytocin receptors (Kirsch, et al., 2005). This subcortical mechanism strengthens oxytocin's candidacy as the moderator of the relationship between intergroup bias and disgust, as it pinpoints oxytocin's influence on a region of the brain known for being used in social processing. The idea that oxytocin exerts its effects via a receptor mechanism indicates that a greater degree of signaling will lead to a strengthening of the role played by the molecule; as oxytocin has been shown to function in processing social relationships, then it would strengthen the relationship between intergroup bias and disgust.

The proposed role of oxytocin as a moderator stems from the idea that it should be able to strengthen the relationship between intergroup bias and disgust. As oxytocin signaling may occur via various routes, from throughout the body to within specific regions of the brain, the intensity of oxytocin's effects may directly affect the extent to which intergroup bias affects the human disgust response. While empirical data does not yet exist to support the moderating role of oxytocin in the relationship between intergroup bias and disgust, studies may be performed to demonstrate the strengthening of the relationship between

intergroup bias and the disgust response in the presence of heightened oxytocin signaling.

For example, researchers may seek to conduct studies in which they present participants with disgusting stimuli associated with an in-group or out-group label to evoke effects of intergroup bias. These researchers could then collect self-report measures of disgust from individuals confronted with the disgusting stimuli after administration of intranasal oxytocin as compared to individuals confronted with disgusting stimuli in the absence of intranasal oxytocin administration. This study may reveal that intranasal oxytocin strengthens the relationship between intergroup bias and disgust, with participants perceiving more disgust towards out-group members and less disgust towards in-group members in the presence of oxytocin than in its absence. Additionally, research endeavors may benefit from comparing the levels of perceived disgust of individuals possessing the social oxytocin receptor type to the levels of perceived disgust of individuals possessing the asocial oxytocin receptor type; these differences in oxytocin signaling may provide information about oxytocin's role in strengthening the effects of intergroup bias on disgust. Again, in such experiments, the disgusting stimuli would be associated with a form of in-group or out-group label to evoke effects of intergroup bias in the experimental setting.

Concluding Remarks

Empirical studies have supported the role of oxytocin in social recognition, especially in the context of disease avoidance. However, until this point, oxytocin has not yet been clearly identified as a moderator between intergroup bias and disgust. The well-characterized and normative disgust response that ensues from disease avoidance has been shown to be susceptible to bias effects. Oxytocin emerges as a likely moderator of these effects as it is a neuropeptide associated with a wide gamut of social recognition behaviors and has also been shown to exhibit tremendous variability in its diverse mechanisms of action. The signaling pathways of oxytocin, as well as the context of the relationship between the disgusted individual and the elicitor of disgust, allow for oxytocin to alter the strength of the relationship existing between intergroup bias and the human disgust response. Hopefully, future research in this field will continue to elucidate the possible mechanisms underlying the effects of in-group and

out-group bias on the disgust response and yield empirical data to support oxytocin's moderating role.

A better understanding of the relationship between intergroup bias and disgust will contribute significantly to concerns of disease transmission that affect society today. This body of knowledge is especially pertinent to individuals who possess certain high-risk diseases. For example, both older and more recent surveys of attitudes relating to HIV/AIDS reported that people explicitly reported disgust when thinking about HIV/AIDS; some individuals even stated that people with AIDS should live separately from the general population (Oaten et al., 2009). The extent to which bias is felt towards individuals afflicted with diseases may not relate solely to the disease status of affected people but also to levels of oxytocin. Further study of socially relevant variables that affect the human disgust response may allow people to either overcome inhibitions that they may otherwise feel towards others or, at the very least, be better informed about the effects of social influence.

Additionally, recent research has revealed that oxytocin possesses various functions in social behavior, and further experimentation with oxytocin will reveal both greater depth of understanding as to its versatility as well as information about the use of oxytocin as a potential therapeutic agent. Very recently, oxytocin has been shown to enhance brain function in children with autism spectrum disorder (Gordon et al., 2013). Autism has been characterized as a developmental disorder marked with impaired social interaction and communication; the efficacy of oxytocin in improving brain function, as evidenced by experimenters using functional MRI, supports the role of oxytocin in processing socially salient stimuli. Oxytocin is a fascinating neuropeptide, and the full range of its social implication has yet to be discovered.

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