USING VISUAL ART TO REDUCE PUBLIC STIGMATIZATION OF PEOPLE WITH INTELLECTUAL DISABILITIES

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ABSTRACT

This study examined the effectiveness for reducing stigmatizing attitudes among non-intellectually disabled people of presenting them with paintings completed by individuals with intellectual impairments. Each participant was placed into one of four groups. Members of the first group were shown 12 paintings created by people with intellectual disabilities and were then asked to fill in a questionnaire that explored their attitudes regarding intellectual impairment. Participants in group two were shown the paintings and additionally spent one minute writing down their thoughts about what it must be like to have an intellectual disability, and then completed the same questionnaire as members of group one. People in group three also wrote down their thoughts about being intellectually impaired and then filled in the questionnaire, but without seeing the paintings. Group four was a control group comprising individuals who simply completed the questionnaire without either viewing the paintings or writing anything down.

Key words: intellectual disability, visual artwork, stigmatization, empathy arousal, stereotypes

1. Introduction

Individuals with intellectual disabilities are frequently stigmatized by members of the non-intellectually disabled public (Evans-Lacko, Henderson, Thornicroft and McCrone, 2013; Fox, Earnshaw, Taverna and Vogt, 2018; McCullock and Scrivano, 2023) and this can detrimentally affect the former's quality of life (Lai, Hong and Chee, 2001; Kirkwood and Stamm, 2006; Evans-Lacko, Brohan, Mojtabai and Thornicroft, 2012; Vrbova et al., 2017). Goffman (1963) described stigma as "the attribution to an individual of a characteristic that is deeply discrediting", and which reduces the bearer "from a whole and usual person to a tainted, discounted one" (p. 3). Stigmatization typically involves cognitive, emotional, and behavioural aspects including prejudice, discrimination, and the expression of explicitly negative (and often unfair) social attitudes (Corrigan and Watson, 2002; Werner, Corrigan, Ditchman and Sokol, 2012). Sometimes, stigmatization results from negative stereotyping, i.e., the ascription to an entire group (often an out-group) of simplified, inaccurate, and offensive generalized beliefs or representations (Biernat and Dovidio, 2000; Pelleboer-Gunnink, van Weeghel and Embregts, 2021)). Stereotypes enable a person to make quick judgments about others

based on a few defining aspects that are assumed to apply to everyone in the stereotyped group. Common stereotypes of people with intellectual disabilities include presumptions that they are dangerous, incompetent, unpredictable, morally deficient, uncooperative, unreliable, and have values and engage in practices different to those found in mainstream society (Biernat and Dovidio, 2000; Scior, 2011).

Pressures to stigmatize can arise from family, friends, work colleagues, or other social contacts. Childhood experiences may be particularly influential in the creation of negative attitudes towards people with disabilities. Parental actions, words, tone of voice, gestures, etc., transmitted to children may have a crucial impact on the formation of attitudes toward disability. Parents often emphasize to their children the importance of health and normalcy, resulting in aversion toward individuals with disabilities (Livneh, 1982).

1.1 Nature of intellectual disability

Intellectual disability involves disabilities in communication skills, social and life skills, personal independence, work functioning, and/or in the ability to learn, reason and solve problems (Shree and Shukla, 2016). Globally, intellectual disability affects 1% to 1.5% of the population. Eighty-five percent of the people affected have "mild" intellectual disability (McBride et al., 2020), defined by the American Psychiatric Association as deficiencies in abstract thinking, planning, strategizing, priority setting, cognitive flexibility, short-term memory, and in functional uses of academic skills (e.g., reading, money management). Language communications competencies of people with mild intellectually disabilities tend to be less mature than expected for persons of their age, and they may have trouble in regulating emotions and behaviour (APA, 2013).

1.2 Interventions to reduce the stigmatization of people with intellectual disabilities

Several types of intervention have attempted to counteract the stigmatization of individuals with intellectual disabilities, focusing mainly on the provision of knowledge about mental health issues. Usually, interventions aim to (i) improve stereotypes, (ii) create positive attitudes, and (iii) discourage intended or actual discriminatory actions (Seewooruttun and Scior, 2014; Walsh and Foster, 2021). Examples include pop-up booths in shopping malls, films, television programmes, radio broadcasts, school visits, theatre initiatives, and celebrity appeals (Clement et al., 2013; Gaiha et al., 2021; Walsh and Foster, 2021). However, three difficulties can affect many of these interventions, i.e., their high financial cost, the time and complexity required to set them up (Libera, Goosse, Larøi and Willems, 2023), and uncertainties regarding their overall effectiveness (Thornicroft, Rose, Kassam and Sartorius, 2007; Clement et al., 2013; Walsh and Foster, 2021).

2. The present study

The aim of the current research was to establish whether showing a selection of paintings completed by people with intellectual disabilities to non-intellectually disabled individuals led to more positive attitudes concerning intellectual disability among non-disabled viewers, in comparison with the attitudes of non-intellectually disabled people who were not shown such paintings. In addition, the study sought to examine the effects of having non-intellectually disabled individuals complete an "empathy exercise", whereby they recorded their thoughts about what it must be like to have an intellectual impairment. The effects of the exercise on the attitudes of (i) non-disabled people who were shown the paintings, and (ii) non-disabled people who were not shown the paintings were then measured. The objective here was to compel the study participants to confront the realities of having to live with an intellectual impairment.

Several considerations suggest the usefulness of this sort of intervention. Reactions to pieces of artwork (paintings in the present study) will differ among viewers, but it is known that art can invoke strong emotions capable of stimulating a person's thoughts and feelings (Malchiodi, 2012; Christensen, Cardillo and Chatterjee, 2022). Exposure to an artwork might promote critical thinking, and possibly invoke personal honesty regarding the observer's biases. According to Ioannides, Pantagoutsou and Jury (2021), viewing art can enhance open mindedness and invoke a willingness to reconsider previously held opinions. Viewers discern the meaning of a painting from the visual

information it contains (patterns, shapes, facial expressions of depicted characters, etc. [Bruder and Ucok, 2000]), and this can create new knowledge, promote understanding; and allow insights, perspective, feelings and ideas to emerge within the observer (Christensen, Cardillo and Chatterjee, 2022, 2023). The feelings induced in a viewer of an artwork could include interest, curiosity (Pelowski et al., 2020; Wassiliwizky and Menninghaus, 2021) and (in the present context) sympathy for the people or situations depicted (Koh and Shrimpton, 2014). Gaiha et al. (2021) completed a systematic review of interventions which employed various pieces of artwork created by people with intellectual disabilities, concluding that the behaviour of non-disabled people towards individuals with intellectual disabilities typically improved after the former had viewed the artwork. Effect sizes were usually small but always positive, and no studies reported unintended harmful consequences.

2.1 Effects on viewers of paintings completed by people with intellectual disabilities

As regards paintings produced by people with intellectual disabilities, viewing a painting by an intellectually impaired individual can challenge the expectations of non-intellectually disabled observers vis-à-vis the nature of intellectual disability. This can occur through causing viewers to try to reconcile differences between (i) what they see, and (ii) their current mental model of intellectual impairment (cf. Pelowski et al., 2017; Christensen et al, 2023). Through their paintings, people with intellectual disabilities can communicate their perspectives to the world (Mykitiuk, Chaplick and Rice, 2015). Non-intellectually disabled viewers are presented with educative, and potentially transformative, experiences which could encourage them to examine their existing attitudes regarding intellectual disability. The non-disabled observer might come to understand the actuality of intellectual impairment in ways that words alone cannot express (Fraser and Al Sayah, 2011). Thus, exhibitions of artwork produced by people with intellectual disability "can provide the appropriate reflective space where viewers can consider the nature of mental impairment and how it affects individuals", thereby "counteracting negative stereotypical views by promoting a more positive perception of mental disability" (Koh and Shrimpton, 2014, p.171). Indeed, empirical research has demonstrated that exhibitions of art by people with intellectual disabilities can significantly induce sympathetic perceptions of intellectual impairment (see for example Health Scotland, 2008; Sartorious and Schulze, 2005; Stuart and Sartorious, 2005; Thomashoff and Sartorious, 2004). The viewer may experience a unique emotional connection with the artwork on display (Gentle et al., 2020) and hence enhanced awareness of mental health issues (Koh and Shrimpton, 2014).

2.2 Simulation intervention

Presenting non-disabled audiences with paintings by individuals with intellectual disabilities is an application of "simulation intervention" i.e., exposing people to an item that reflects a stigmatized condition. Viewers might then engage with the art, establish a cognitive connection with the artist. and adopt the perspective of a member of the stigmatized group. This might promote empathy and hence the revision of negative attitudes (Libera et al., 2023). Observing paintings by individuals with intellectual disabilities can challenge non-intellectually disabled people's preconceived perceptions of the existence of differences between people with or without intellectual impairments (Thomashoff and Sartorious, 2004), essentially by seeing that individuals with intellectual disabilities are "not necessarily weird" and hence that they should be treated with respect (Seidler, 2011; Koh and Shrimpton, 2014). However, although simulation intervention may increase empathy, it could also create detrimental effects, e.g., by creating a desire for social distance (Yee and Bailenson, 2006; Fraser and Al Sayah, 2011). Some viewers might feel inspired and reflective, but others could be unsettled, even distressed by the experience (Fraser and Al Sayah, 2011).

3. Materials and methods

The samples for the study comprised students at the home university of one of the authors, for two reasons. Firstly, the student body at the university in question was mainly homogenous (mostly coming from middle-income families), and secondly because the university has many thousands of students from which sub-samples could be drawn. The students in the samples would have entered the university with similar educational qualifications and were likely both to have had broadly similar lifetime experiences and to engage in the same sorts of pastimes. This relative comparability of test

subjects should reduce the likelihood of extraneous variables influencing the results. Only students aged between 19 and 26 were included in the study, which was undertaken over a full academic year.

Individuals were assigned (during classes) to one of four groups. Members of group 1 (N=231) were shown 12 paintings produced by people with intellectual disabilities and told that the paintings were the work of people with intellectual impairment. Then, the participants completed a questionnaire (see the Appendix to the paper) querying their personal characteristics, assessing the extents of their stigmatized attitudes towards people with intellectual disabilities, and including covariates likely to affect outcomes (e.g., past familiarity with art and sense of presence when viewing a painting). The paintings themselves were selected by asking 40 students who possessed characteristics comparable to those of individuals in the main sample to rate each of 20 contemporary paintings downloaded from disability websites and created by people with intellectual disabilities. The pictures involved various line configurations, shapes, textures, and colours, i.e., features known to affect feelings among viewers of paintings (e.g., sad, happy, angry, or empathetic [Bruder and Ucok, 2000]). Participants rated each picture (five-point scales) according to the extents to which it "stirred my feelings", "made me think", "spoke to me", "attracted my attention", and "aroused emotions in me" (cf. Gentle et al., 2020). The 12 pictures with the highest aggregate ratings were used in the study.

Members of group 2 (N=191) were also shown the paintings and told that the paintings were by people with intellectual disabilities. Group 2 participants were given the same questionnaire as the members of group 1, but in addition completed a short exercise to evaluate their empathetic feelings regarding intellectual disability. This required group 2 members to spend up to a minute writing down their thoughts about what it is like to live with an intellectual disability (cf. Libera et al., 2023). Arguably, through enabling a participant empathetically to adopt the perspective of a stigmatized person, this exercise should cause the participant to revise negative beliefs they may previously have held about people with intellectual disabilities (Batson et al., 1997). On the other hand, compelling an individual to think hard about intellectual disability could possibly increase prejudice.

Individuals in group 3 (N=171) were not shown the paintings, but did complete the empathy exercise and the questionnaire. Group 4 was a control group (N=124) comprising people who only completed the questionnaire. Members of group 4 were asked to fill in the same questionnaire three weeks later, 93 members of the original group responding. This was to check whether the questionnaire may have been completed flippantly in the first instance, which would be evidenced by substantially divergent replies. In fact, there was close correspondence between the two sets of responses, suggesting that proper thought had been applied to the task. All four groups were approximately evenly divided between males and females.

3.1 Measures of variables

The questionnaire began with conventional demographic queries. Stigmatizing attitude was measured using three items adapted from Link, Cullen, Frank and Wozniak's (1987) Social Distance Scale and eight items from Taylor and Dear's (1981) Community Attitudes to Mental Illness Scale. Perceived negative attributes of people with intellectual disabilities were evaluated via six items suggested by Yeh, Jewell and Thomas' (2017). As familiarity with intellectual disability could affect a person's responses, this was assessed through two items based on Evans-Lacko et al. (2011). A person's knowledge of art was evaluated through a single item from Kottasz and Bennett (2006). (People with more knowledge of art are likely to have more nuanced emotions when viewing artwork [Chatterjee et al., 2010; Fayn et al., 2018].) Enthusiasm for art might also exert an effect and thus was measured by three items also taken from Kottasz and Bennett (2006). A viewer who experiences a deep sense of presence when observing a painting could be more affected by the event than other people (Starr and Smith, 2023). Among the participants shown the paintings, a viewer's sense of presence vis-à-vis the artworks was measured using four items based on Gatineau's Presence Questionnaire (Laforest, Bouchard, Crétu and Mesly, 2016). This instrument assesses an observer's feelings of (i) "being there", (ii) the paintings being meaningful, and (iii) how deeply the paintings communicated with the participant. The questionnaire was pretested via administration to 16 volunteer students not included in the main samples to identify and correct any ambiguities in item wordings. It included items from the Crowne-Marlowe (1960) social desirability scale to assess the possible presence of social

desirability in responses. However, these items were viewed very negatively by the pre-test participants, who objected to their highly personal nature and lack of relevance to the main study. Hence, the likelihood of social desirability bias arising within the responses was assessed via an examination of the frequencies, means and standard deviations of replies to items that a priori might be expected to give rise to bias. None of the average percentages in the highest response categories of these items exceeded 28%, suggesting the absence of substantial social desirability bias in the study outcomes.

4. Results

4.1 Group response differences

Mean averages of the items measuring each of the constructs listed in the Appendix are shown in Table 1, which indicates that participants shown the paintings prior to filling in the questionnaire recorded more favourable attitudes towards intellectual disability than people who had not seen the pictures. The data for community attitudes (see the Appendix) was normally distributed, with similar variances across the four groups, so an ANOVA was applied to this data which revealed the presence of significant differences (F=6.72, p=.004) among the groups. Tukey post-hoc tests showed that (a) people who saw the paintings *and* completed the empathy exercise recorded more positive community attitudes concerning intellectual disability than people who only viewed the paintings (p=.04), and (b) on average the members of both these groups (G1 and G2) were more sympathetic vis-à-vis community attitudes than (i) individuals who were only given the empathy exercise (G3), and (ii) people in the control group (G4) (p<.04 in all cases).

TABLE 1. PARTICIPANT RESPONSES: MEAN VALUES

	Group 1	Group 2	Group 3	Group 4
Social distance	2.71	2.99	2.44	2.34
Community attitudes	3.40	3.68	3.02	2.99
Perceived characteristics of people with intellectual disabilities	2.41	2.58	3.13	3.20
Familiarity with intellectual disability	2.22	2.26	2.34	2.29
Knowledge of art	2.36	2.25	2.35	2.42
Enthusiasm for art	2.54	2.45	2.51	2.55
Gatineau's Presence Measure	3.18	3.26	NA	NA

The same sequences of results emerged from the data for social distance and perceived characteristics. Data for neither of these variables was normally distributed. Thus, a nonparametric Kruskal-Wallis test was employed, which identified the presence of significant difference across the four groups (Chi-square=6.58, p=.037). Post-hoc Dunn's Z-tests revealed the same pattern of significant differences as for community attitudes (p<.05 in all cases), i.e., members of G1 and G2 displayed more positive attitudes towards people with intellectual disabilities than people in G3 and G4. On average there were no statistically significant differences between the responses of members of the control group (G4) and people only given the empathy exercise prior to filling in the questionnaire (G3). There were no significant differences in Table 1 regarding the variables other than social distance, community attitudes, and perceived characteristics.

4.2 Outcomes to the empathy exercise (groups 2 and 3)

Members of group 2 used an average of 19 words (group three 21 words) to express their thoughts about what it must be like to have an intellectual disability. A variety of mostly negative feelings were reported, often concerning anxiety, stress, fear, confusion, feelings of helplessness, and/or lack of self-esteem (e.g., feeling inferior). Other comments related to coping strategies, e.g., need to ignore adverse comments, not to be ashamed. The participants' responses were worded in different ways, making it impossible to extract meaningful word clusters using conventional sentiment analysis software. Hence the replies were analysed by hand, using the Quirkos coding package (https://www.quirkos.com/). Codes were generated via a constant comparison technique, i.e., provisional codes were allocated to the first few responses and the remarks of subsequent respondents were then allotted to these codes whenever possible. New codes were created for emerging sub-categories and, where appropriate, existing codes were adjusted or combined. Six parent codes and examples of comments are shown in Table 2.

TABLE 2. PARENT CODES*

As a person with an intellectual disability, I:					
Group 2			Group 3		
might be treated unfairly, for example, I am likely to:	*am worthy of support, for example I:*	*have certain abilities, for example I:*	*tend to lack control, for example I:*	*often lack understanding, for example I:*	*tend to be vulnerable, for example I:*
- experience a lot of discrimination - be frequently excluded from social events - often be ignored or rejected - often be badly treated - feel lonely and isolated	- can do things like those done by non-disabled people - am capable of developing skills - can live a reasonably independent life	- can be creative - am capable of participating in community life - have the ability to confront and overcome challenges - should be able to take care of myself in most respects	- often find it hard to control my emotions - have problems communicating with others - often miss deadlines - often do not behave like other people	- become confused - tend to be illogical - tend to forget things - frequently do not understand what is said to me	- tend to be gullible - find it difficult to look after myself - need a lot of assistance - can be helpless
% of the sample making this type of comment					
20	23	28	32	22	16

*The words and phrases shown are summary interpretations of the many words and phrases used to describe these feelings.

4.3 Associations with stigmatizing attitudes

Table 3 presents the correlations within the data for G1 and G2 between the three dependent variables and other variables. As expected, people with knowledge and/or experience of intellectual disability recorded more favourable attitudes towards intellectual impairment than did individuals who were unfamiliar with the condition (cf. Chatterjee et al., 2010; Fayn et al., 2018), However, participants who were knowledgeable and/or enthusiastic about art did not respond significantly differently to the favourability measures than other members of either of the samples that saw the pictures, although

Gatineau's Presence measure correlated significantly with the dependent variables for both of these groups.

TABLE 3. CORRELATIONS*

| | Group 1 | | | Group 2 | | |
	Social distance	Community attitudes*	Perceived characteristics	Social distance	Community attitudes	Perceived characteristics
Familiarity with intellectual disability	.55 (.000)	.47 (.007)	-.31 (.042)	.61 (.000)	.55 (.000)	-.38 (.038)
Knowledge of art	-.10 (.391)	.09 (.444)	-.16 (.255)	.09 (.400)	-.07 (.397)	.10 (.132)
Enthusiasm for art	.20 (.099)	.21 (.087)	-.11 (.177)	.09 (.238)	.09 (.311)	.16 (.300)
Gatineau's Presence Measure	.32 (.044)	.29 (.045)	-.25 (.049)	.35 (.018)	.33 (.011)	-.37 (.024)

*Pearson's R. All other correlations computed as (nonparametric) Kendall's Tau. Significance levels in parentheses.

5. Discussion and conclusion

The results indicate that viewing the paintings *and* completing the empathy exercise substantially improved the attitudes of the present samples of non-intellectually disabled people towards intellectual impairment. Viewing the paintings but without completing the empathy exercise (Group 1) was rather less effective, yet still led to more favourable attitudes among viewers than members of groups three and four who had not seen the pictures. This suggests that exhibitions of artwork completed by people with intellectual disabilities can constitute a low cost yet powerful means for improving public attitudes regarding intellectual impairment. It is relevant to note the questionable effectiveness of alternative forms of intervention intended to reduce the stigmatization of people with intellectual disabilities (Thornicroft et al., 2007; Libera et al., 2023), plus their high cost. Paintings can be shown online, obviating the need for the participant to be present in the place where the intervention is implemented (Libera, et al., 2023). These findings confirm past literature which asserted that viewing artwork can exert a deep emotional impact on the observer (Malchiodi, 2012; Gentle et al., 2020; Christensen et al., 2022), even to the point of changing the person's attitudes (cf. Pantagoutsou and Jury, 2021; Christensen et al., 2023). It seems that artwork produced by people with intellectual impairments presents viewers with impressions of the "normality" of the artists who created the work (cf. Koh and Shrimpton, 2014; Pelowski et al., 2020; Gaiha et al., 2021).

Substantial differences arose between the favourability of attitudes towards intellectual impairment expressed by (i) people shown the paintings in association with the empathy inducing exercise (Group 2), and (ii) those just completing the empathy exercise in the absence of the paintings (Group 3). The bottom row of Table 2 indicates that around 70% of the comments of members of group two were positive in nature, while about 70% of the comments of group three were negative. While it will not usual possible to ask visitors to an exhibition to complete an empathy exercise of the kind used in the present study, venues can present statements around specific exhibits worded in ways designed to arouse empathy among viewers.

As expected, familiarity with intellectual disability correlated significantly with favourable attitudes regarding intellectual impairment (see Evans-Lacko, 2013). However, neither knowledge of, nor enthusiasm for art exerted significant influences (cf. Chatterjee et al., 2010; Fayn et al., 2018). Thus, it appears that arts devotees within the samples were likely to hold similar attitudes towards intellectual disability after seeing the paintings as anyone else in the study. Gatineau's Presence measure correlated significantly with the favourability variables among the participants in G1 and G2 who saw the paintings. The more a viewer felt "inside" the paintings the more favourable the responses.

Stimulation of a viewer's sense of presence could occur through (i) the appropriate physical construction of exhibition environments, (ii) suitable wordings of text in exhibit labels, (iii) introductory talks discussing exhibitions, or perhaps (iv) by providing collateral haptic experiences within galleries (cf. Barnby and Bell, 2017).

People with intellectual disabilities form the largest disability population on earth. It is necessary, therefore, for state agencies, charities that support people with intellectual disabilities, museums, and art galleries to be prepared to mount exhibitions of artwork produced by people with intellectual impairments. The nature and contents of such exhibitions should be widely publicised, and perhaps subsidised by national governments. Public relations campaigns within the general arts community could be undertaken to stimulate interest in exhibitions of this kind among private and public galleries and museums.

5.1 Limitations and areas for future research

Certain limitations apply to the research, including the use of a student sample (employed to ensure a reasonable degree of homogeneity among the participants), modest sample sizes, and the fact that the study took place in a single country. Also, the research was completed within a university environment (in classrooms) rather than in a physical art gallery. Replication of the study in other countries and other viewing environments would be worthwhile. Further research would be useful in relation to how exactly emotions are aroused as a non-intellectually disabled individual observes a painting created by a person with an intellectual disability. What are the precise psychological mechanisms involved? Are disparate emotions aroused when non-intellectually disabled people view artwork produced by individuals with different types of intellectual disability, e.g., bipolar disorder, Aspergers syndrome? Are specific genres of artwork created by people with intellectual disabilities (paintings, sculpture, tapestry, painting of landscapes, avant-garde modernistic works, etc.) more effective for influencing non-intellectually impaired individuals, and if so, what are the reasons for differences? Do improvements in viewers' attitudes towards intellectual disability last for long periods, or do they quickly dissipate? What are the cognitive connections between observing artwork created by people with intellectual impairments and specific types of attitude change? It has been suggested that viewing artwork promotes critical thinking (see Ioannides et al., 2021; Christensen et al., 2022 and 2023). How might this occur in the context of intellectual disability?

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APPENDIX 1. THE QUESTIONNAIRE

Unless otherwise stated all items were scored on 5-point agree/disagree scales.

1. **Social distance**
I would feel very comfortable about:
(a) renting a room in my home to someone with an intellectual disability?
(b) working on the same job alongside with someone with an intellectual disability?
(c) having someone with an intellectual disability as my next-door neighbour?

2. **Community attitudes**
(a) In general, I feel favourable towards people with intellectual disabilities.
(b) More emphasis should be placed on protecting the public from people with intellectual disabilities. (Reverse scored [RS])
(c) People with intellectual disabilities have for too long been the subject of ridicule.
(d) We need to adopt a far more tolerant attitude toward people with intellectual disabilities in our society.
(e) Increased welfare spending on people with intellectual disabilities is a waste of money. (RS)
(f) We have a responsibility to provide the best possible care for people with intellectual disabilities.
(g) It is best for people with intellectual disabilities to live in secure and supervised accommodation apart from the rest of the community (RS).
(h) Residential neighbourhoods are not suitable places to locate intellectual disability support organisations and facilities (RS).

3. **Perceived characteristics**
People with intellectual disabilities:
(a) Can be dangerous.
(b) Tend to be irresponsible.
(c) Tend to be unpredictable.
(d) Tend to be incompetent.
(e) Can appear threatening.
(f) Can be very difficult to deal with.

4. **Familiarity with intellectual disability**
(a) Have you ever worked with, lived with, been close to or had a neighbour with intellectual disability? (Yes/No).
(b) I know a lot about intellectual disability (five-point scale).

5. **Adaptation of the Gatineau Presence Questionnaire**
(a) I felt I was immersed in some of the paintings.
(b) My experience of engaging with the paintings seemed very real.
(c) My experience of engaging with the paintings seemed artificial (reverse scored).
(d) I felt I was there alongside some of the artists.

6. **Self-reported knowledge of art**
(a) Compared to other people I have a great deal of knowledge about art and art history.

7. **Enthusiasm for art**
(a) Art/s and culture represent a vital part of my life.
(b) All in all, I am a true enthusiast when it comes to attending art exhibitions.

(c) In general, I am a frequent visitor to museums and art galleries.

APPENDIX 2. THE PAINTINGS

Painting by Laurel Burns   artsy.net/artist/laurel-burns

Destiny Blue   destinybluestore.com
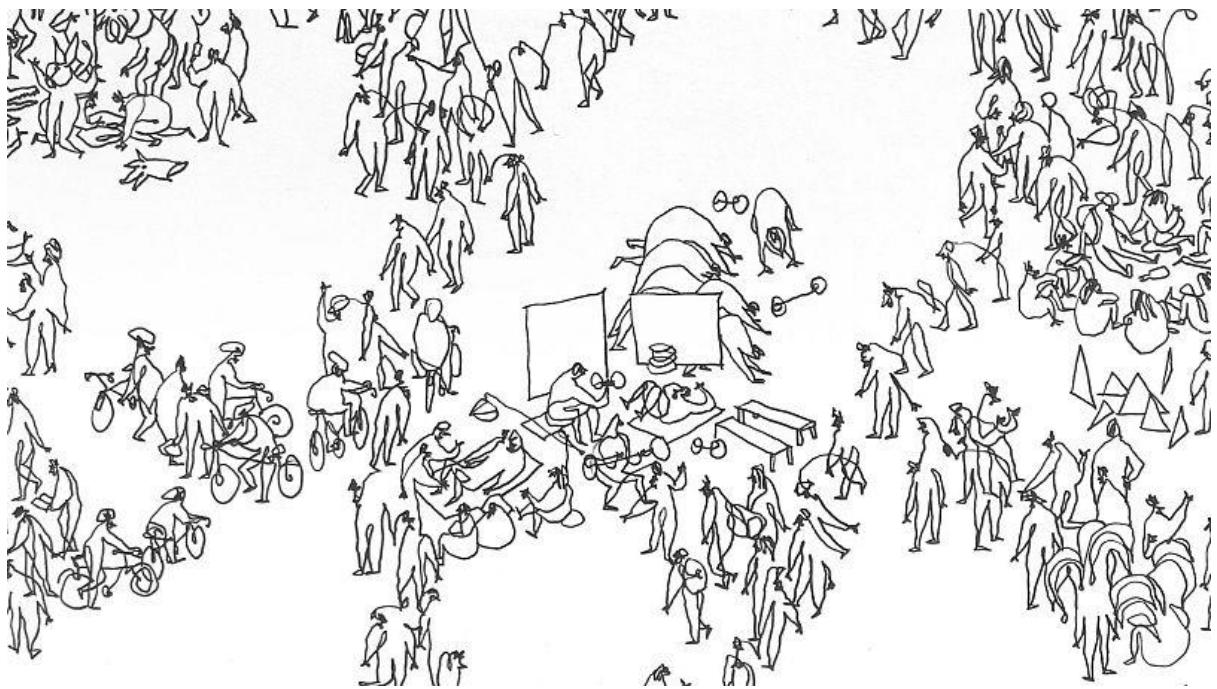

M. Doughlas   Uckiood.com/2365

M. Doughlas   Uckiood.com/2365

Marcia Diaz   twentytwentyarts.com

Ralph Blakelock   brushwiz.com

Aimee   Artimee.com

Carlos Penalver   euronews.com/culture
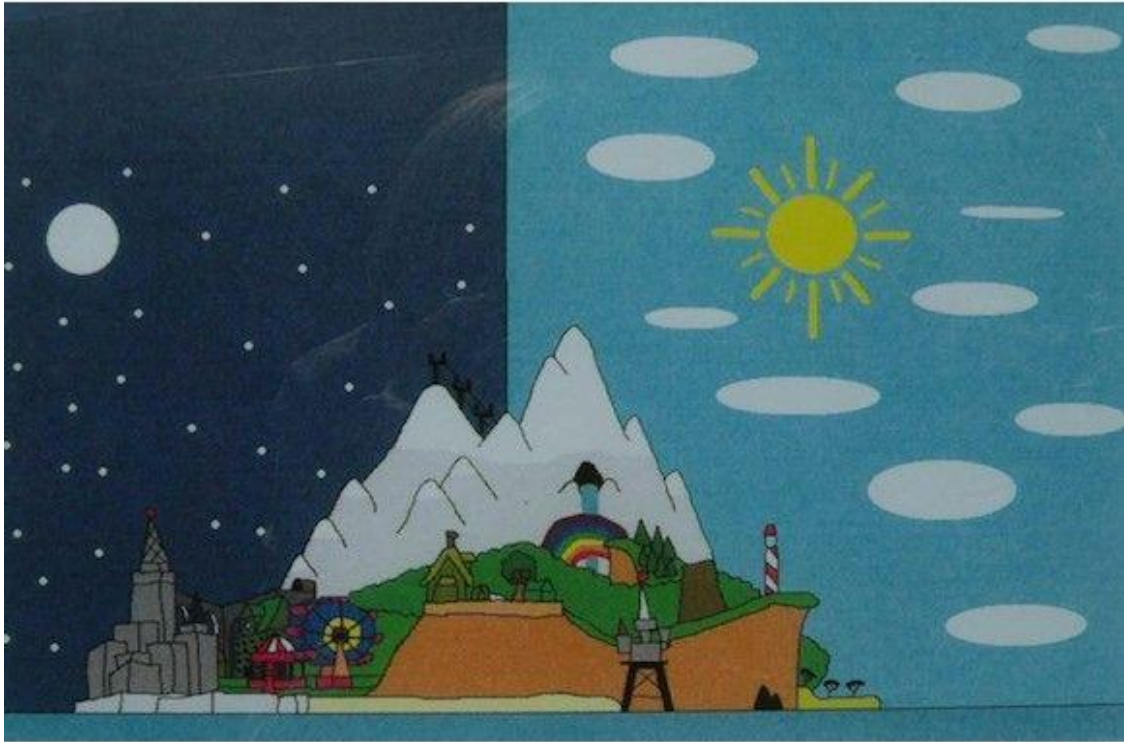
Firstnature   firstnaturedesign.com

Susan Spangenberg   susanspangenberg.com
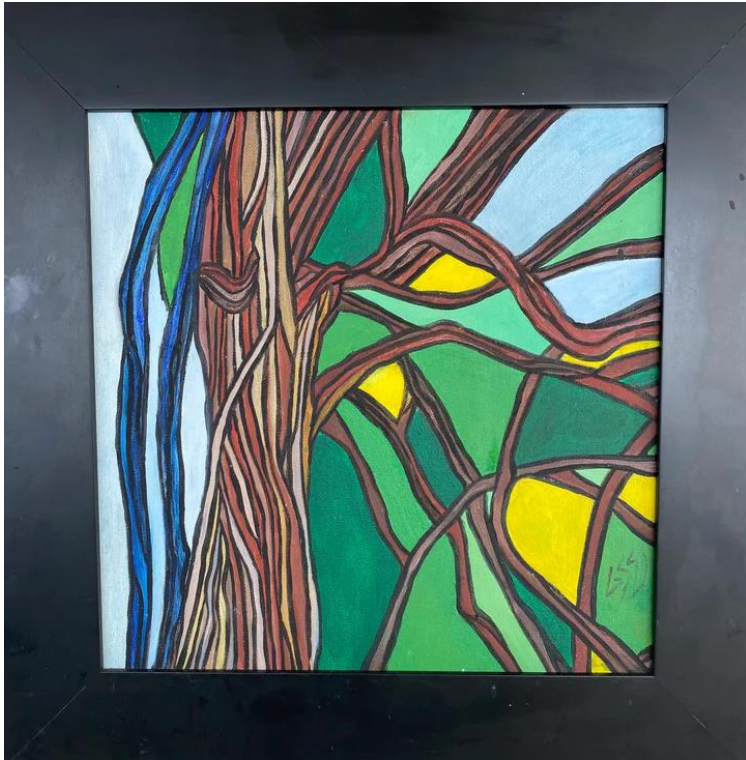
Greta Waterman   siygallery.com
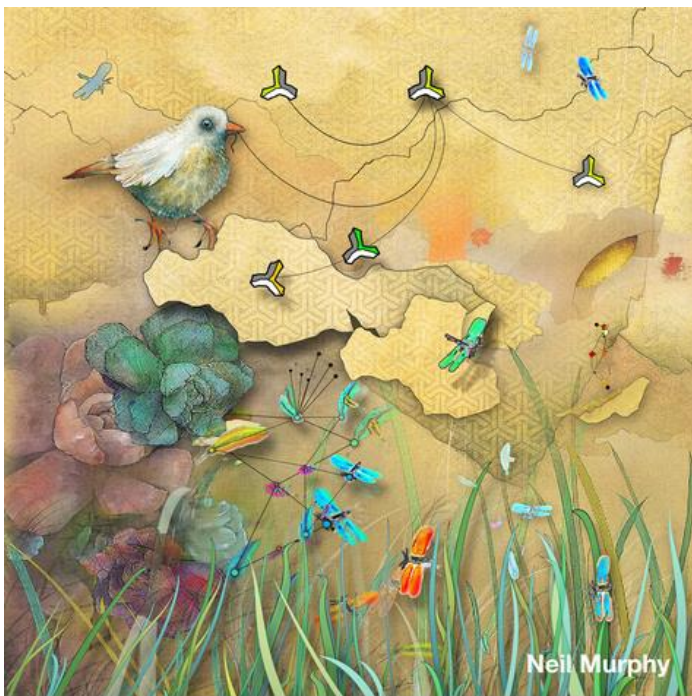
Neil Murphy   siygallery.com