

Course on Great Experiments in Psychology
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Module 4
Lecture No 18
The Measurement of Androgyny

Hello everybody welcome back to this lecture series on great experiments in psychology. In today's session we are going to talk about something very different. We are going to talk about sex roles and how we perceive ourselves, whether we see ourselves as being more masculine or more feminine. Whether it actually goes with our gender specific roles as in, if I am female, do I see myself as doing more of the feminine task?

Or do I actually have to do a lot of masculine task as perceived by society and this sex role perception or this idea of psychological androgyny or androgyny as it is called by some was first discussed by a feminist and specifically Sandra Bem in 1974. And I thought that this would be a good session to take a primarily because here we are in today's session we are going to talk about, how Bem formed this concept of androgyny and how she actually developed this scale to measure androgyny and the different sex roles.

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BACKGROUND AND CONTEXT

- Prior to the 1970s, the prevalent view (both within psychology and in society) was that an individual could be either masculine or feminine
- People who achieved a good fit with their sex type/sex role (i.e. a masculine male and a feminine female) were better adjusted physiologically/ psychologically healthier than those who did not (Moghaddam, 1998)
- Widely used psychological tests (developed between the 1930s and the 1960s, such as the Terman and Miles scale) made it impossible for an individual to register as both highly masculine *and* highly feminine: they were seen as mutually exclusive i.e. the nearer the masculine end of the scale you scored, the further away from the feminine end you were
- So, it was impossible to find any *androgynous* people, that is, individuals who *display both* masculine *and* feminine characteristics
'andro' = male, 'gyne' = female



So to understand what was the status of sex role identification in society prior to the 1970s, the prevalent view primarily within psychology and also outside that is within society was that an individual could be either masculine or feminine. So that is people who achieve their good fit with their sex type or sex role, that is a masculine male or more feminine female,

were assumed to be better adjusted physiologically as well as they were assumed to be psychologically healthier than those who did not.

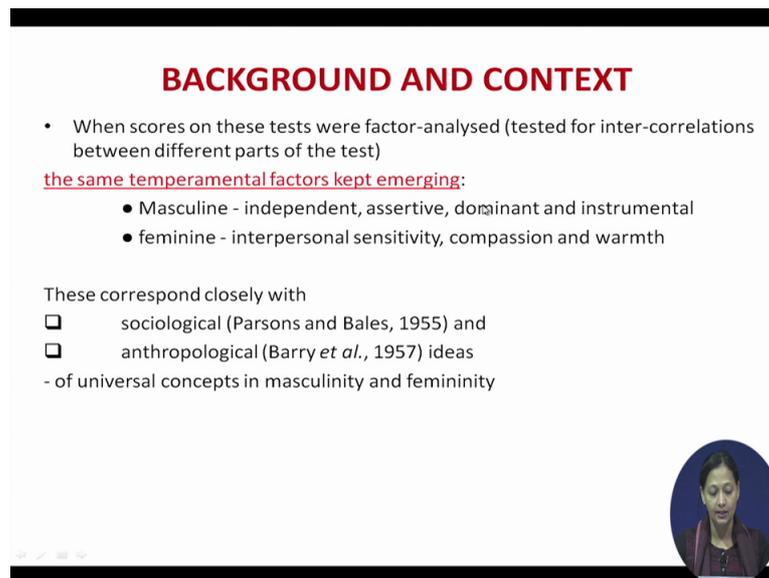
Now there were several tests which were measuring this sex role, specially between the 30s and 60s and some of the famous scales are from Terman and Miles, but this made it impossible, these scales were structured in such a way that they did not actually measure anything but the masculinity in males and femininity in females, so these scales were thus very mutually exclusive, now that means that the nearer the masculine end of the scale you scored, the further away from the feminine end you were.

So this is like a linear continuum and where so if an individual if a male is scoring more on the masculinity scale on the masculine traits, so since it is a linear continuum, that individual will be very low on the feminine traits, while for a female if the individual, if it is if he berates himself as somewhere higher on the feminine scale, then likewise he will be she will be very low on the masculine side on the masculine characteristics. Now it was so this made it impossible to identify androgynous people.

That is individual who displayed both the masculine as well as feminine statistics. Now androgynous come from the word Andro that is male and gyne that is female. So an individual androgynous means that an individual who has both the masculine characteristics as well as feminine characteristics. Now before the 70s as I said, the concept was unthinkable and seen as we move in society as per the desirability of the society.

So most of the times individual would behave a masculine a male would behave more towards the I mean expressing more masculine traits and female expressing more feminine traits, otherwise it would be considered as pathological, so one could not have both the traits. But that is why Bem's study on the sex role and especially on androgyny was a revolutionary study and that's also one of the reasons why I brought this up in this section and we will also see how she actually constructed her test.

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BACKGROUND AND CONTEXT

- When scores on these tests were factor-analysed (tested for inter-correlations between different parts of the test)
the same temperamental factors kept emerging:
 - Masculine - independent, assertive, dominant and instrumental
 - feminine - interpersonal sensitivity, compassion and warmth

These correspond closely with

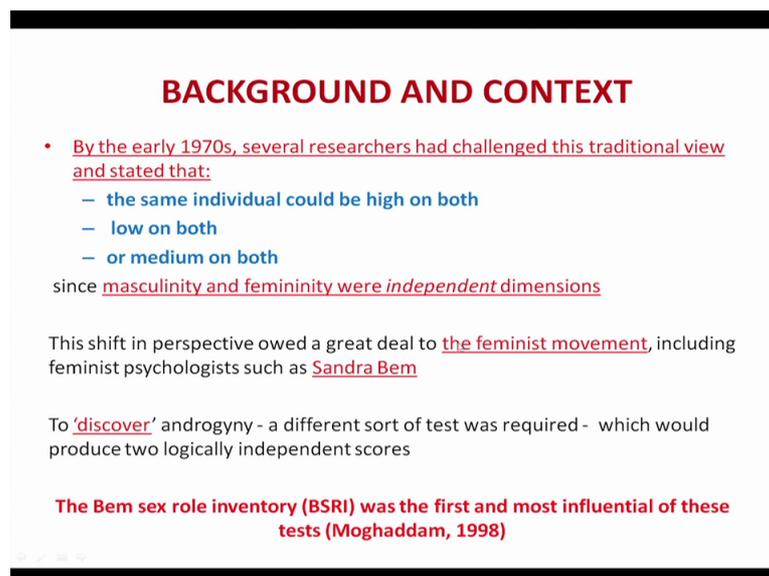
- ☐ sociological (Parsons and Bales, 1955) and
- ☐ anthropological (Barry *et al.*, 1957) ideas

- of universal concepts in masculinity and femininity



So when scores on these test these previous tests were factor-analysed it was seen that the same temperamental factors kept emerging that is masculine factors would be independent, assertive, dominant and instrumental and feminine would be interpersonal sensitive, compassion and warmth. And these first bonded closely with other skills so they sociologically ideas prospect this by Parson and Bales and the anthropological ideas of Barry et and others in 1957 and these were primarily the universal concepts of masculinity and femininity.

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BACKGROUND AND CONTEXT

- By the early 1970s, several researchers had challenged this traditional view and stated that:
 - the same individual could be high on both
 - low on both
 - or medium on both

since masculinity and femininity were independent dimensions

This shift in perspective owed a great deal to the feminist movement, including feminist psychologists such as Sandra Bem

To 'discover' androgyny - a different sort of test was required - which would produce two logically independent scores

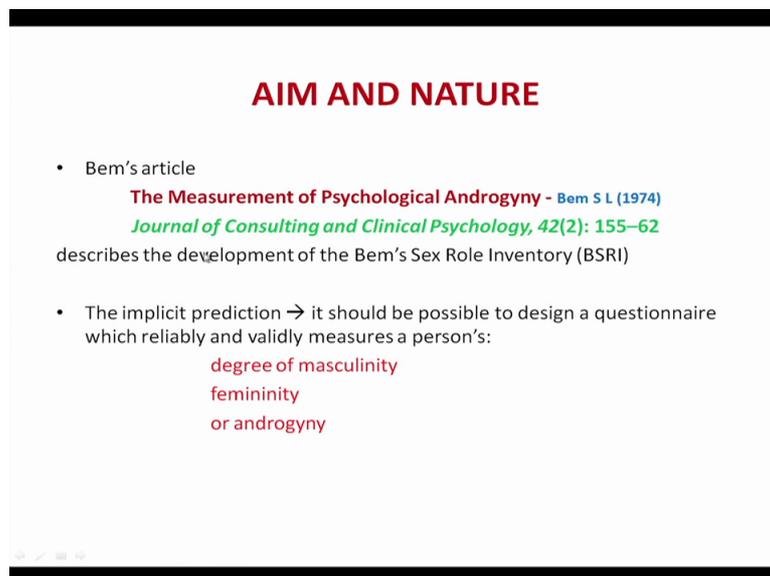
The Bem sex role inventory (BSRI) was the first and most influential of these tests (Moghaddam, 1998)

But by the early 1970s there were several researchers who have challenged this traditional view and stated that the same individual could have both masculine as well as feminine traits.

So it is not only near continue with the two poles being masculinity and femininity, but a person could have I could be high on both masculine traits as well as feminine traits or could be low on both or medium on both, so masculinity and femininity was explained as an independent dimensions for the first time in the 70s and this shift in perspective owed a great deal to the feminist movement, as outspoken earlier and one of the revolutionary was Sandra Bem.

So to discover androgyny a different sort of test was required and which would produce two logically independent scores, so it would have one scale that would actually characterise masculinity and other would have to be on femininity. So that is how Bem came out came about with the idea of the sex role inventory and it is named after her, so it is known as Bem sex role inventory and this is was the first and the most influential of these tests. Several tests were created constructed later but this is the first one on sex role and especially to (())(6:55) and (())(6:55) and this is one of the most influential of the test, even if it you still and you will see publication even in as frequently as in 2013 and in 2016 using Bem Bem's scale.

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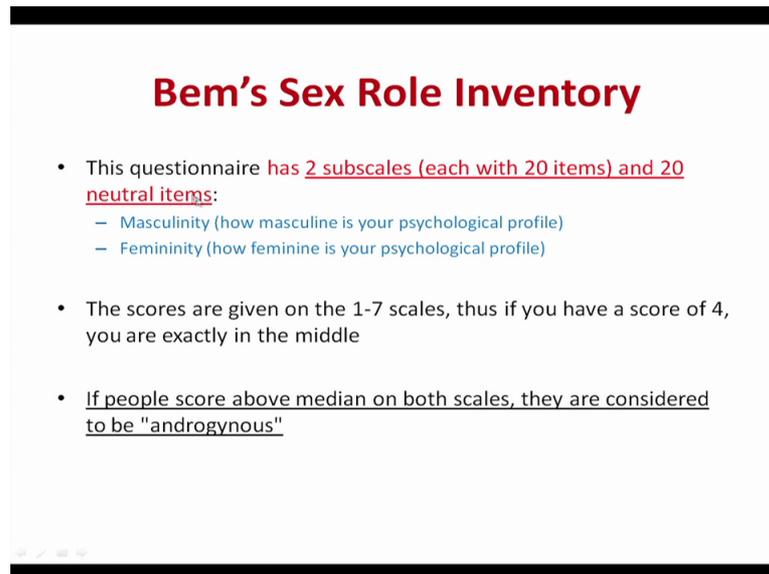


AIM AND NATURE

- Bem's article
The Measurement of Psychological Androgyny - Bem S L (1974)
Journal of Consulting and Clinical Psychology, 42(2): 155-62
describes the development of the Bem's Sex Role Inventory (BSRI)
- The implicit prediction → it should be possible to design a questionnaire which reliably and validly measures a person's:
degree of masculinity
femininity
or androgyny

So Bem published this article on the measurement of psychological androgyny in 1974 in the Journal of consulting and clinical psychology and she here she describes the development of the BSRI, so the implicit prediction of the scale walls it should be possible to design a questionnaire which reliably and validly measure of person degree of masculinity, femininity, or and androgyny.

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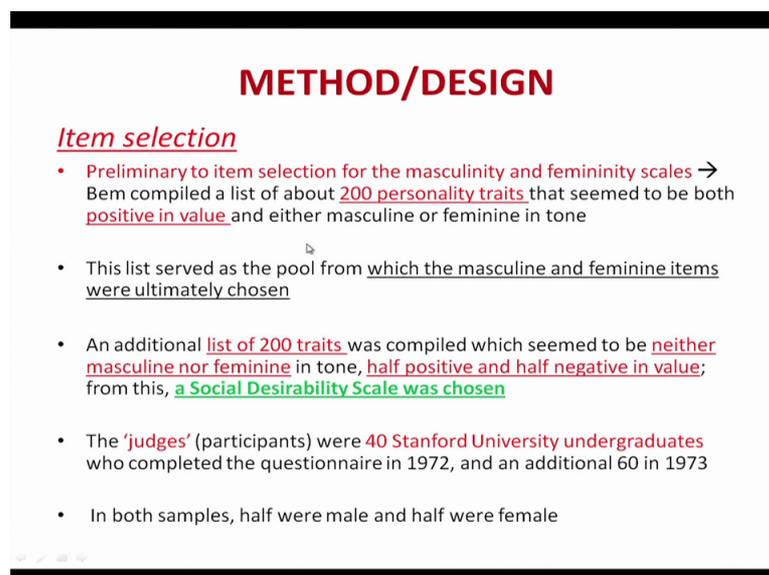
Bem's Sex Role Inventory

- This questionnaire has 2 subscales (each with 20 items) and 20 neutral items:
 - Masculinity (how masculine is your psychological profile)
 - Femininity (how feminine is your psychological profile)
- The scores are given on the 1-7 scales, thus if you have a score of 4, you are exactly in the middle
- If people score above median on both scales, they are considered to be "androgynous"

So this question had has two subscales so each has with 20 items and 20 neutral items, so 20 items are on masculinity so that is how masculine is your psychological profile and 20 on femininity that is how feminine is your psychological profile and the scores are rated on a 7 point scale, and so if you have a score of 4 you are exactly in the middle.

So if people score above median and on both scale, they are considered to be androgynous, so that is if somebody has a high masculinity as well as a high femininity score, then they are known to be androgynous. Now let us see the construction of the text so this start with, we needed to be Bem needed to have an item selection.

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METHOD/DESIGN

Item selection

- Preliminary to item selection for the masculinity and femininity scales → Bem compiled a list of about 200 personality traits that seemed to be both positive in value and either masculine or feminine in tone
- This list served as the pool from which the masculine and feminine items were ultimately chosen
- An additional list of 200 traits was compiled which seemed to be neither masculine nor feminine in tone, half positive and half negative in value; from this, a Social Desirability Scale was chosen
- The 'judges' (participants) were 40 Stanford University undergraduates who completed the questionnaire in 1972, and an additional 60 in 1973
- In both samples, half were male and half were female

So what she did was, she compiled a list of 200 personality traits that seem to be both positive in value and either masculine or feminine in tone and this list served as the pool from which the masculine and feminine items were ultimately chosen. Other than this an additional list of around 200 traits was compiled with seem to be neither masculine nor feminine in tone.

So these traits were half positive and half negative in value and from this she actually came about with the social desirability scale. So the traits were taken for the social desirability scale were taken from this list of 200 traits of which actually had both positive as well as negative traits. The judges or the participants, now this scale, these traits so many were actually given to the judges and these judges were none other than the participants 40 Stanford University undergraduates, who completed the questionnaire in 1972 and later on there were 60 more people who actually became judges in 1973 and in both the samples it was an equal division of males and females.

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METHOD/DESIGN

- Because the BSRI was designed to measure how much a person distances himself/herself from those characteristics that might be considered more 'appropriate' for the opposite sex, the final items were selected if they were judged to be more desirable in US society for one sex than the other

Specifically, judges used a seven point scale, ranging from 1 (not at all desirable) to 7 (extremely desirable)

1 2 3 4 5 6 7

to rate the (approximately) 400 personality characteristics. Each judge rated the desirability of all 400 traits either 'for a man' or 'for a woman';

no judge rated both

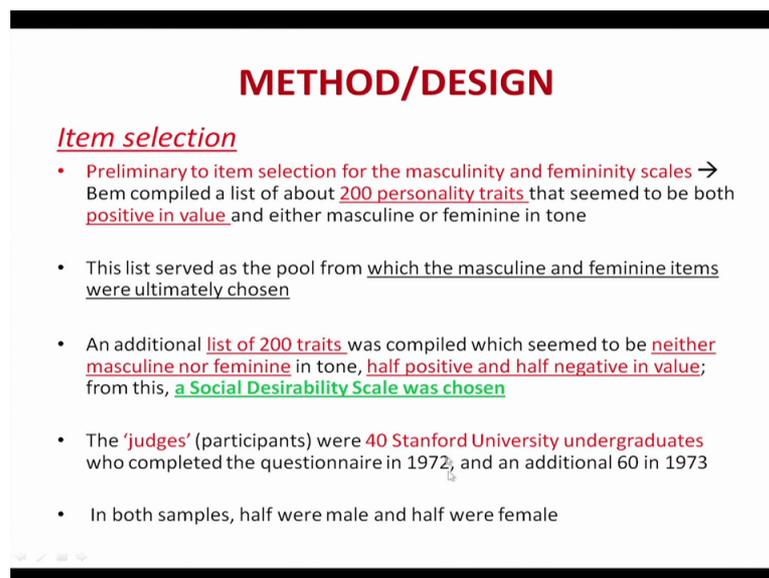
- A personality trait qualified as masculine if it was independently judged by both males and females in both samples to be significantly more desirable for a man than for a woman; similarly for feminine traits

So then this, after these traits were collected and the judges were given, what would judges supposed to do? The BSRI was designed to measure how much a person distances himself or herself from those characteristics that might be considered more appropriate for the opposite sex. So the final items were selected if they were judged to be more desirable in US society for one sex than the other. So actually what is being taken into account is also the social perception, so here that is why they were also the final items were selected if they were judged to be more sociable so that is more desirable in the US society so if the traits was this

was going to mark the social desirability item, so whether the traits were more appreciable in society.

So that would also identify with specific masculine traits as how the society perceives masculinity and how the society perceives femininity. So of course these change with the time, so think about female in the in the 70s and think about a female even in our society today in the 2010s 2017 now, there the perception of the female is very different of the sex rule of the female is very different from what perception we had or what was how it was the sex role was explained in the 70s, so 40 years before 40 - 50 years before, so it is also so the we must understand the society has a major role to play in they are identifying with the sex rule that was why Bem took this into consideration and the judges used a seven point scale, ranging from one that is not at all desirable to 7 which was extremely desirable to rate the 400 personality characteristics.

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METHOD/DESIGN

Item selection

- Preliminary to item selection for the masculinity and femininity scales → Bem compiled a list of about 200 personality traits that seemed to be both positive in value and either masculine or feminine in tone
- This list served as the pool from which the masculine and feminine items were ultimately chosen
- An additional list of 200 traits was compiled which seemed to be neither masculine nor feminine in tone, half positive and half negative in value; from this, a Social Desirability Scale was chosen
- The 'judges' (participants) were 40 Stanford University undergraduates who completed the questionnaire in 1972, and an additional 60 in 1973
- In both samples, half were male and half were female

So we have the 200 personality traits for masculinity and femininity and 200 traits that was half positive and half negative value for social desirability and the judges were asked to that is hundred judges, they were asked to read these on seven point scale and where one was not at all desirable and seven was extremely desirable and each judge rated the desirability for all the 400 traits, either for a man or for a government mandated it only for one person.

So that is no judge rated both, so one either did it for man or delete for woman and a personality trait qualified as masculine if it was independently judged by both males and females in both samples to be significantly more desirable for a man than for a woman. So if

a trait is supposed to be masculine then it has to be judged as masculine by our man as well as a woman and it should be significantly more desirable for a man than a woman and it was the same with the femininity traits.

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METHOD/DESIGN

Of those traits that met the criteria:

- 20 were chosen for the **masculinity scale** (including aggressive, competitive, and self-reliant)
- 20 for the **femininity scale** (including compassionate, sensitive to the needs of others, and yielding)

A **neutral trait** was one which:

- was independently judged by both males and females to be **no more desirable for one sex than the other**;
- **did not produce significantly different desirability ratings** by male and female judges

Ten positive and ten negative traits met these criteria, and were chosen for the **Social Desirability Scale**

Now after those traits were selected it was found that 20 was chosen so the traits that actually match the criteria were 20 for masculinity scale and 20 for the femininity scale, so there were 40 that were selected and the masculinity scale what was what were the traits it included, so primarily aggressive, competitive and self- reliant And for the femininity scale, it included items like traits like compassionate, sensitive to the needs of others and yielding.

A neutral trait on the other hand was one which was independently by judged by both males and females to be no more desirable for one sex than the other. So it was not specific for a particular sex, so that was how it did not and it did not produce significantly different desirability ratings by mail or female judges so it was not specifically more desirable for a male or a female and it was not judged differently by a male or female, so the like this you know 10 positives and 10 negatives traits were taken that met the criteria were chosen for those social desirability scale.

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METHOD/DESIGN

- Once all the individual items had been selected, mean desirability scores were computed for the masculine, feminine and neutral items for each of the 100 judges
- For both males and females, the mean desirability of the 40 masculine and feminine items was significantly higher for the 'appropriate' sex, while for the neutral items it was no higher for one sex than the other
- These results, of course, were a direct consequence of the criteria used for selecting the items

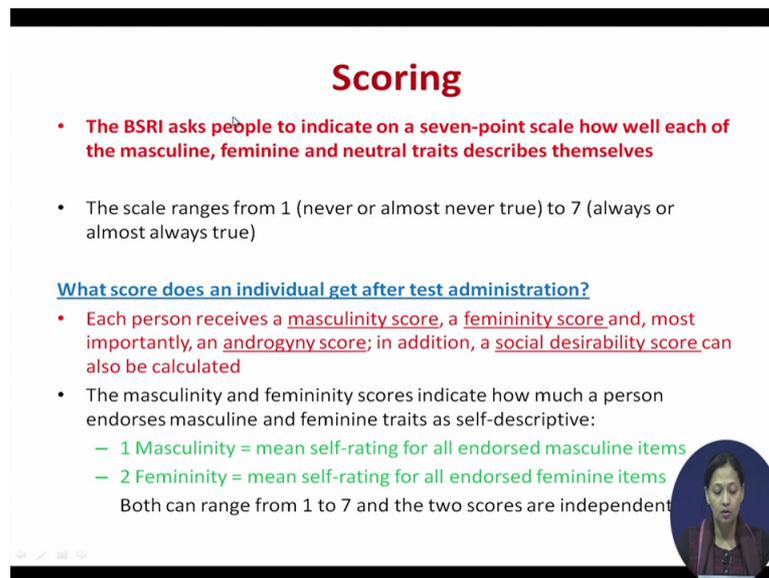


So actually as we have discussed earlier this scale consist of 60 items, so that would be 20 for masculinity scale, 20 for femininity scale and 20 for the social desirability scale. So once all the individual items had been selected, the mean desirable discourse were computed or each of the scales so that is masculine, feminine and neutral items and for the hundred judges. So for both the males and females the mean desirability of 40 masculine and feminine items was significantly higher for the appropriate sex.

Now this probably we would be able to assume it face validity, but here you know what is more important is that we are not going by intuition, in the previous class we spoke about not going for in by intuition but being a professional psychologist and being with things in a more experimental way so here we have seen that the this was done very statistically following the rules of mythology and it was seen that the mean desirability of the 40 masculine and feminine items were say so that is the masculine items.

It was significantly higher for the meal sex and the feminine item the mean desirability was more was significantly higher by the female sex. While the neutral items for the neutral items it was no higher for one sex or the other, so it was more or less similar. So these results of course were direct consequence of the criteria used for selecting the items. Actually that was... this this test showed that the items had been properly selected. So the main items were different from the female items the match lady items were different from the femininity items and naturally the neutral items were not comparable with a learner masculinity was not related by the masculinity or femininity.

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Scoring

- The BSRI asks people to indicate on a seven-point scale how well each of the masculine, feminine and neutral traits describes themselves
- The scale ranges from 1 (never or almost never true) to 7 (always or almost always true)

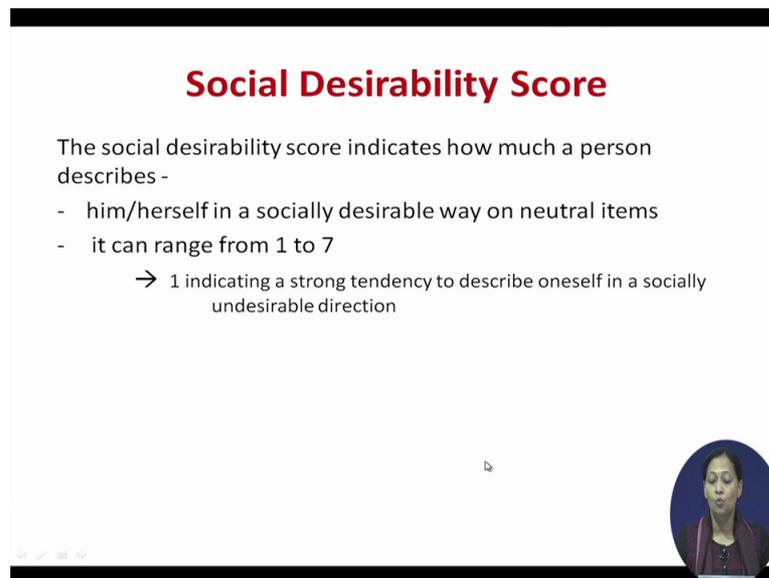
What score does an individual get after test administration?

- Each person receives a masculinity score, a femininity score and, most importantly, an androgyny score; in addition, a social desirability score can also be calculated
- The masculinity and femininity scores indicate how much a person endorses masculine and feminine traits as self-descriptive:
 - 1 Masculinity = mean self-rating for all endorsed masculine items
 - 2 Femininity = mean self-rating for all endorsed feminine itemsBoth can range from 1 to 7 and the two scores are independent

So now let us come to the scoring so the BSRI or the Bem Sex Role Inventory asked people to indicate on a seven point scale how well each of the masculine, feminine and neutral it describes themselves. So it is a subjective scale where the individual has to assess himself or herself and say that, how well does a particular trait define himself or herself on a 7 point ratings and the scale ranges from 1 that is never or almost never true to 7 always or almost always true and what is the score that the individual gets after administration? So each person will receive a masculinity score, a femininity score and most importantly an androgyny score.

In addition there is also social desirability score that can be calculated. The masculine tea and femininity score indicates how much a person endorses masculine and feminine traits as self-descriptive. So that is the masculinity score is the mean self-rating for all endorsed masculine items and the femininity score would be the mean self-rating for all the endorsed feminine items and now both can range between 1 and 7 1 to 7 and the two scores are independent, that is why we get an individual masculinity score and individual femininity score femininity score.

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Social Desirability Score

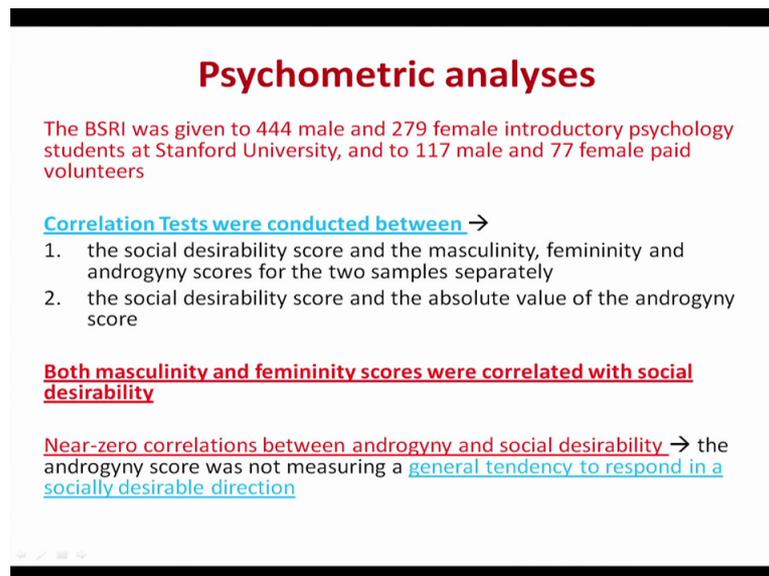
The social desirability score indicates how much a person describes -

- him/herself in a socially desirable way on neutral items
- it can range from 1 to 7
 - 1 indicating a strong tendency to describe oneself in a socially undesirable direction

Now coming to the social desirability score, the social desirability score indicates how much a person describes him or her in a socially desirable way on neutral items. That is again it ranges from 1 to 7, so that is whether we want to be perceived as more approving of our social role, so now mind you these are on neutral items, so whether an individual wants to see himself as more pleasing, more comforting, more congenial, so now these are items, I am just thinking out aloud so if you if you take the BSRI it is available online, you will be able to see you will identify the neutral items from which actually the social desirability is calculated and it indicates so as I said it is between 1 to 7 rating scale and one indicating a strong tendency to describe oneself a socially undesirable.

So if say somebody say if there is a trait on being congenial there if a person says friendly say friendly, so this the person says that scores are 1 rates himself as one so that would be strong tendency to describes once oneself in a socially undesirable direction. If this person rate himself a 7 then it would be more towards a socially desirable direction.

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Psychometric analyses

The BSRI was given to 444 male and 279 female introductory psychology students at Stanford University, and to 117 male and 77 female paid volunteers

Correlation Tests were conducted between →

1. the social desirability score and the masculinity, femininity and androgyny scores for the two samples separately
2. the social desirability score and the absolute value of the androgyny score

Both masculinity and femininity scores were correlated with social desirability

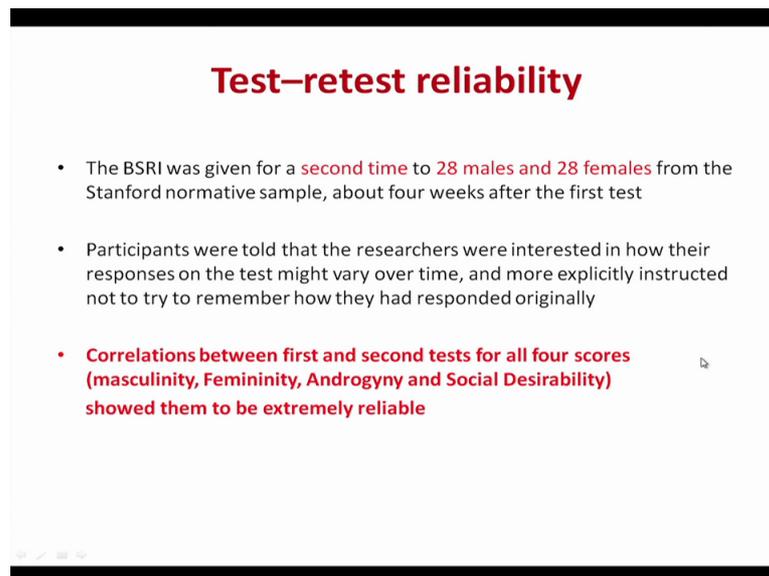
Near-zero correlations between androgyny and social desirability → the androgyny score was not measuring a general tendency to respond in a socially desirable direction

So now coming to this psychometric analysis, when we are constructing a test, so as you see in this BSRI the item selection was done then the judges rated it and then after that it was the median value were found and then after that it was administered on people. Now so there, when we are actually what is important is to have to standardise a test. So to standardise so that we can actually generalise results and standardisation means that we need to have the test needs to be reliable, valid and have norms and so especially for the population that it has been conducted on.

So the BSRI was given to 444 males and 279 females introductory psychology students at Stanford, and to hundred and 117 male and 77 female paid volunteers. So after that, after administration correlation test were conducted between the social desirability score and the masculine, femininity and androgyny scores for the two samples separately and the social desirability score and the absolute value of the androgyny score. So we have the social desirable the score and masculinity, femininity and androgyny and that was done separately and then the social desirability score with the absolute androgyny score and it was seen that both masculinity and femininity scores were correlated with social desirability.

So there is this tendency of giving responses in a more socially desirable way, when we are talking of our sex role types. So near-zero correlations were seen between androgyny and social desirability. So it was it could be said that the androgyny score was not measuring a general tendency to respond in a socially desirable direction.

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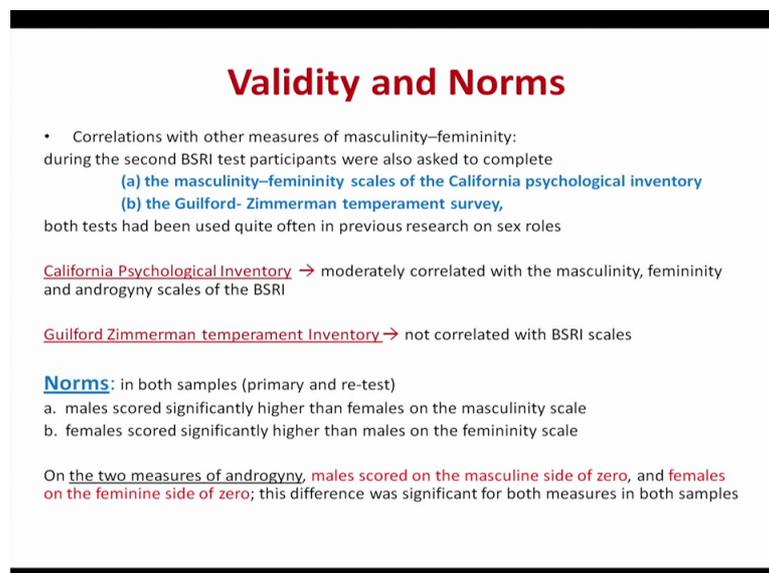


Test-retest reliability

- The BSRI was given for a **second time** to **28 males and 28 females** from the Stanford normative sample, about four weeks after the first test
- Participants were told that the researchers were interested in how their responses on the test might vary over time, and more explicitly instructed not to try to remember how they had responded originally
- **Correlations between first and second tests for all four scores (masculinity, Femininity, Androgyny and Social Desirability) showed them to be extremely reliable**

So the test-retest reliability was conducted and the BSRI was given for a second time to test the reliability of the test it was given a second time in 228 males and 28 females from the Stanford normative sample, about four weeks after the test after the first test and participants were told that the researchers were interested in how their responses on the test might vary over time, and more explicitly instructed not to try to remember what they have given as their first responses. So preliminary responses that is it, so it was seen that there was a very high correlation between the first and the second test for all the force scores so that is between masculinity, femininity, Androgyny and social desirability and so this test was extremely reliable.

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Validity and Norms

- Correlations with other measures of masculinity–femininity:
during the second BSRI test participants were also asked to complete
 - (a) the masculinity–femininity scales of the California psychological inventory
 - (b) the Guilford- Zimmerman temperament survey,both tests had been used quite often in previous research on sex roles

California Psychological Inventory → moderately correlated with the masculinity, femininity and androgyny scales of the BSRI

Guilford Zimmerman temperament Inventory → not correlated with BSRI scales

Norms: in both samples (primary and re-test)

- males scored significantly higher than females on the masculinity scale
- females scored significantly higher than males on the femininity scale

On the two measures of androgyny, **males scored on the masculine side of zero**, and **females on the feminine side of zero**; this difference was significant for both measures in both samples

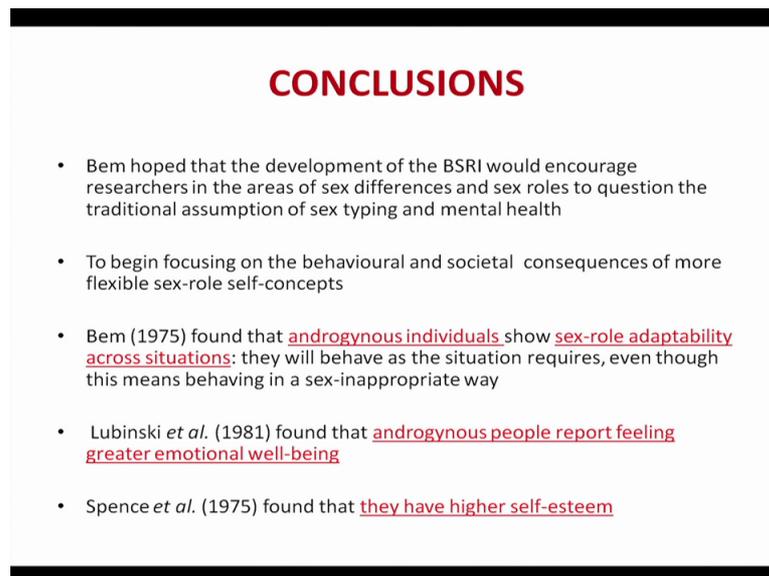
Now coming to the validity and norms, this to test the validity it was again core-related with the 2 other test primarily the masculinity, the femininity scale of the California psychological inventory and the Guilford Zimmerman temperament inventory. Now this showed very interesting results, the California psychological inventory was moderately correlated with the masculinity, femininity and Androgyny scale of the BSRI. But the Guilford Zimmerman temperament inventory whatnots go related with the BSRI scales.

Now coming to the norms both the samples that cause for the primary as well as the re-test males score significantly higher than females on the masculinity scale, females scored significantly higher than males on the family scale and on the two measure of Androgyny males scored on the masculine side of zero and females on the feminine side of zero so this difference was significant for both measures in both samples.

So now that tells us a lot about construction of a scale, so if you wish to do some research in psychology, especially for constructing a scale, then I would suggest that we know there are several books that you could go through, one of them being (())(26:55) on social psychology there was there is another famous book by Horowitz and but you know this is the starting point.

This was how it was done so you can actually this is the real time study that was carried out and this concept of Androgyny was introduced the first time because before this it was actually thought that if an individual, if a male is not showing too many masculine traits, then this this individual is suffering from mental health problem and the vice versa the likewise for the female.

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CONCLUSIONS

- Bem hoped that the development of the BSRI would encourage researchers in the areas of sex differences and sex roles to question the traditional assumption of sex typing and mental health
- To begin focusing on the behavioural and societal consequences of more flexible sex-role self-concepts
- Bem (1975) found that androgynous individuals show sex-role adaptability across situations: they will behave as the situation requires, even though this means behaving in a sex-inappropriate way
- Lubinski *et al.* (1981) found that androgynous people report feeling greater emotional well-being
- Spence *et al.* (1975) found that they have higher self-esteem

But Bem study showed that there would be a different indication of mental health and it also changed the traditional assumption of sex typing and to begin focusing on behavioural and societal consequences of more flexible sex-role self-concepts. You know actually you could try out this test online and see for yourselves whether you have, if you are a male how much of the masculine traits you have and how much of the feminine traits you have and similarly you know you could and also the Androgynous traits, so it would it is it is very interesting to actually do this study on ourselves specially and you could you know you can also do this for generation before and you see that how much would be the diversity whether there is too much of dispersion between...

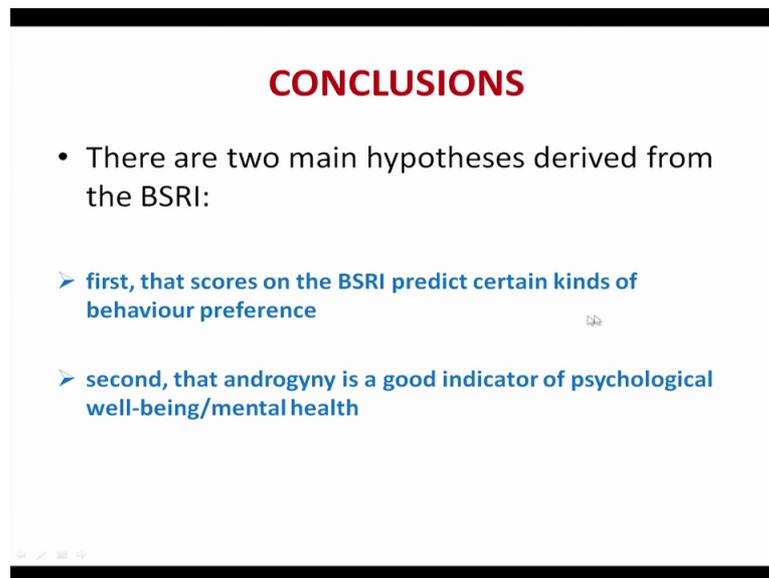
So if it is your grandmother or if it is your mother then, is she more feminine or as compared to I mean other femininity traits more as compared to the masculinity trait, I mean you could just try this out and see you know same ways with our with your generation than with your friends and peers also, so this is specially mind you it does not mean that if a female has more of masculinity traits, it does not mean that she has a mental health problem.

It just means that our sex roles so our societal responsibilities or reactions or demand that we have more flexibility in our sex roles and that is what this study actually shows, so Bem in 1985 that androgynous individuals show sex eyed activity across situations, they behave as the situation requires even though this means behaving in a sexually inappropriate way.

So female may be more masculine in a situation trying to be more flexible and adjusting and accommodating and the other side it could be you now like the sex roles have been

predefined in the current society male may be cooking and more compassionate towards the child and more considered doing more of household chores and which was considered as a female role earlier. So even psychologically traits could be both present in time in both traits could be present in a male and female. Now Lubinski et. Al also in 1981 found that androgynous people report feeling greater emotional well-being, so they are more adjusted and accommodated and more happy and Spence et al. in 1975 found that they have higher self-esteem.

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CONCLUSIONS

- There are two main hypotheses derived from the BSRI:
 - first, that scores on the BSRI predict certain kinds of behaviour preference
 - second, that androgyny is a good indicator of psychological well-being/mental health

So basically in this study there are two main hypothesis that are divided, so first that is the scores on the BSRI predicts certain kinds of behavioural preference and second that androgyny is a good indicator of psychological well-being and mental health. This is this is the first study of its kind that actually contradicts the sex-role typing that was done earlier and this this study has also brought about... this is a reflection of society and also proud about a change in the way people started perceiving themselves, so I thought that this would be a good study to actually introduce in our lecture series. Thank you.