May 2020

OfficeHours_IS31_20160405_Seg02.pdf

Ethno Studies OfficeHours_IS31_20160405_Seg02

Setting: Mild loudness. Recitation in a classroom. Often looks at notes
Participants: IS31 (male,lakers sweater) S1 (female, maroon sweater) S2 (male, green jacket) S3 (male, gray hat)

0:02
XXX ((S1 shuffling through papers))
XXX S1: I have this question° (.2)
XXX oh this one e
XXX ((points at papers and found page))
XXX IS31: m: which
XXX S1: twenty:
XXX IS31: twenty [three,
XXX S1: [three
XXX m:
XXX ((still flipping through pages))
XXX so (.1) this one ((points at paper))
XXX IS31: uh: ok
XXX yea (.) so:
XXX how (.) do you-
XXX S1 so I have this two (.) equation°
XXX ((pointing at note))
XXX IS31: let me see, (.)
XXX uh:
XXX ah:
XXX ((pause while IS31 reads the question))
XXX IS31: ((unclear))
XXX yea (.1) it's right,
XXX S1: but I get x is one point twenty six
XXX it's not possible°
XXX IS31: why is not possible?°
XXX S1: oh
XXX maybe it's ((unclear))
XXX you are right
XXX ok ((laughs)) so um ((flips notes))
XXX ((IS31 gets distracted by someone off screen))
XXX IS31: oh you can put my bag on the (.) floor°
XXX ((talking to off screen student))
XXX S1: ((draws attention back to self))
XXX and also (.)
XXX twenty seven (.) e
XXX uh c (.1)
XXX ((corrects herself from e to c))

XXX uh
XXX yea c
XXX IS31: uh twenty
XXX S1: twenty seven c (which is this one) ((shows page))
XXX this one=
XXX IS31: =oh ok
XXX this is uh
XXX ok
XXX (>plenty of student have have asked a lot<)
XXX uh: so (.)
XXX for part a
XXX you have already calculated the probability that for one
XXX women
XXX she is taller than (five foot and eighteen
XXX right?
XXX S1: yea
XXX IS31: and its probability should be the same for everyone
XXX S1: oh yea [so we should use the- the p↑ ((unclear))-
XXX IS31: [so
XXX no=
XXX S1: =distribution,
XXX [no no the binomial distribution because he also
XXX ((unclear)) also say that (.)
XXX there are one hundred women.
XXX so you'll know the n
XXX S1: ah
XXX IS31: and you'll know the p so it's uh binomial [distribution
XXX ((interrupted by S2))
XXX S2: [wait
XXX for: (.) twenty seven, (.2)
XXX IS31: thirty seven
XXX S2: oh
XXX IS31: ah
XXX S1: ((looks up from writing notes))
XXX binomial°
XXX but
XXX S2: [oh yea it is (one o seven)
XXX S1: [you see
XXX but you see this one↓
XXX this is (.2)
XXX hold on
XXX IS31: ((unclear due to background noise)) there's always
XXX only one parameter dominant
XXX right?
XXX S1: yea

XXX IS31: yea so
XXX but in this case there are two parameters
XXX the n and the p
XXX S2: ((sudden realization))
XXX S3 ((interrupts from left))
XXX S2: [oh:
XX S3: [can I ask you something?
XXX IS31: [uh ok=
XXX S3: [when you are done with her?
XXX let me know when you are done with her.
XXX IS31: ok
XXX S1: ok
XXX alright um:=
XXX IS31: =so that's the main (.) difference.=
XXX S1: =and (.) the last question.
XXX the (.)
XXX this multiple ((unclear))
XXX so
XXX IS31: part e?
XXX S1: yea
XXX ((pause))
XXX IS31: m::
XXX ((pause))
XXX ((pauses are due to thinking))
XXX so:
XXX ((unclear)) the cdf, (.2)
3:00
XXX yea you can just use the cdf
XXX S1: just use the-
XXX so I put (.) point one↑ plus point five° ((writing it down))
XXX IS31: uh:
XXX ok th- this is also
XXX yea
XXX and integrate with pdf
XXX right
XXX I mean-
XXX S1: integrate with pdf° ((talking to self))
XXX IS31: because
XXX if you want to calculate the probability
XXX you can (.) uh
XXX one method is to (.) do integration of the pdf
XXX and the other is
XXX you can just use the cdf
XXX because you-
XXX as you have calculated this in part b

XXX so I think maybe it's (.) more easy way
XXX S1: just use cdf?
XXX IS31: yea because we know that ((takes S1's pen to write))
XXX th- the meaning of cdf is just uh
XXX S1: [antiderivative of pdf
XXX IS31: [of x (.) is
XXX the probability that x is less than this (.) right,
XXX ((writing in book))
XXX S1: mhm
XXX IS31: so now we want to calculate the probability that
XXX S1: ((mumbles))
XXX IS31: and uh
XXX this is equal to the probability that
XXX x is is less than (.) point minus (x is xx)
XXX and therefore this two probability you can just uh°
XXX because you have two integrations
XXX so you don't need to (.) do that (again)
XXX S1: yea ok
XXX uh just one last question
XXX about the slides
XXX sorry ((looks at S3 who is waiting))
XXX IS31: ok ((laughs))
XXX S1: um (.1) so (.)
XXX yea
XXX so right here: ((trails off because looking @notes))
XXX oh see (.) this one ((points at question))
XXX this one we use um
XXX (poisson distribution)
XXX not binomial distribution=
XXX IS31: =yea
XXX ((pause))
XXX S1: because we don't have
XXX because we don't have
XXX we don't know about
XXX IS31: uh=
XXX S1: =t
XXX IS31: uh:
XXX actually:
XXX you know↓ because it say that
XXX every three hours there are four (cloves)
XXX so you can know that maybe every [one hour
XXX S1: [but (.)
XXX that's the:- that's the expected value
XXX right?
XXX you can know the expected value=

XXX IS31: =yea yea (.2)
XXX [but there- there's
XXX S1: [but that's not because
XXX IS31: th- you can think
XXX you can view it as p
XXX but actually there is (.) no un
XXX ((says "n" as "un"))
XXX you don't know the (.) times of (experiment)=
XXX S1: =no ((writes no in notebook))
XXX so this is no n.
XXX IS31: yea
XXX S1: but for this one↓ you have n
XXX right?
XXX which is five hundred, (.1)
XXX no I think you do know n
XXX n is one
XXX cus it's next hour so
XXX IS31: [eh:
XXX S1: [so next hour is just ((trails off))
XXX IS31: um:
XXX actually: no
XXX because
XXX uh: (.1)
XXX ok (.) m:
XXX ((pause))
XXX I think this (.3)
XXX so you are (.1)
XXX you are confused this question [with
XXX S1: [yea
XXX I'm confused about the poisson distribution
XXX and binomial distribution
XXX IS31: but (.) for this case (.2)
XXX actually there are
XXX have you- you (.)
XXX you can use binomial distribution
XXX S1: I can [use binomial distribution?
XXX IS31: [yea so how to
6:00
XXX how to get un and p ((un = "n"))
XXX ((.2))
XXX S1: n is one
XXX p is (.) four over three.
XXX IS31: ok n is one so (.)
XXX it can only occur one time or zero time,
XXX but actually that's (.) not possible right,

XXX it can occur for two three [time
XXX S1: [I- I'm just confused
XXX cus this one we use [poisson distribution
XXX IS31: [thi- thi- [this one
XXX S1: [this one we use
XXX binomial (.) distribution and (.) poisson distribution=
XXX IS31: =uh
XXX S1: right?
XXX IS31: for this case the:
XXX let me see the problem°
XXX I'm (probably) sure ((trails off))
XXX S1: cus during the exam binomial distribution ((unclear))-
XXX IS31: because he know-
XXX he know- he knows the probability that (.) any given
XXX (page↓ contains) ((unclear))
XXX so
XXX this serves as (.) the parameter (procedure)°
XXX and he say that it has (five hundred page)
XXX S1: so we can use binomial
XXX IS31: yea
XXX binomial distribution is (.) accurate
XXX but (.) you can use poisson distribution to do approximation
XXX (.1)
XXX S1: so this is also
XXX ((pointing at notes))
XXX [it's not accurate enough
XXX IS31: [this is uh:
XXX th- this is uh:
XXX accurate (.) poisson distribution.
XXX (.2)
XXX it means that uh: (.) is rarely is uh binomial-
XXX uh uh uh poisson distribution
XXX ((uh uh uh = correcting himself))
XXX however this case
XXX actually is binomial distribution.
XXX but you can use poisson to do approximation
XXX S1: ok and th- the the
XXX the the (.2)
XXX when p is really
XXX when p is really small when [n is ((unclear))
XXX IS31: [yea yea yea
XXX thi- thi- this is the condition
XXX S1: ((unclear))
XXX IS31: yea yea

XXX this is the condition that you can use poisson to do
XXX [approximation
XXX S1: [ok (.) thank you
XXX ((leaves))
XXX S3: I have a question
XXX ((S3 comes to sit down next to IS31))
XXX ((S2 offscreen interrupts))
XXX S2: oh
XXX S3: no you go ((to S2))
XXX S2: no [go ahead
XXX S3: [you've been waiting
XXX IS31: uh:
XXX this is your homework,
XXX ((gives paper S1 left to her))
XXX S1: oh yea it's my homework thank you
XXX S2: um ((moves next to IS31:))
XXX about this
XXX the gamma distribution°
XXX IS31: ok
XXX (.3) ((reading question))
XXX S2: so (.)
XXX distribute this two (.1)
XXX IS31: oh ok
XXX you can just write (.) this down,
XXX x and ((unclear))
XXX S2: so I can just leave it like this? ((points @paper))
XXX ((unclear))
XXX IS31: uh:
XXX for pdf
XXX yea for pdf that's fine (.)
XXX but if you want to (.) calculate the cdf,
XXX you better write it (.) as uh:
XXX uh: (.1) uh:
XXX uh what's- how to say
XXX polynomial form.
XXX S2: yea [(so we got a)
XXX IS31: [yea like a x
XXX S2: (how do I write it yea how do I write it) ((unclear))
XXX IS31: m: ((motions for pen))
XXX S2: I already did this calculation ((points @paper))
XXX I just have to [do this calculation ((points elsewhere))
XXX IS31: [yea it's
XXX (x multipled by one minus x squared)
XXX right?=
XXX S2: =yea

XXX IS31: and you can first explain this
XXX do you know how to?
XXX S2: yea [x squa:red,
XXX IS31: [it's x
XXX [yea yea
XXX S2: [it's x squared:
XXX IS31: x squared minus two x [plus one right?
XXX S2: [((unclear)) yea
XXX IS31: and multiple by x
XXX S2: (yea)
XXX and so that's x [cubed
XXX IS31: and it's
XXX [x cubed
XXX S2: minus [2x squared
XXX IS31: [minus 2x squared [plus x
XXX S2 [plus x
XXX IS31: yea you can-°
XXX this is a better way to (.) do integration
XXX S2: yea
XXX ((both nods))
XXX IS31: but for pdf it's fine (.)
XXX to just write like this°
XXX S2: a:nd
XXX this is all I need to do for pdf
XXX tha- that's it for pdf?
XXX IS31: yea
9:00
XXX and uh for cdf you need to do (.) integration maybe