

Understanding Views on Sentience and Conservation: A Study of Emotional Experiences with Wildlife

Authors

Cpcc'Tgkm{.'Cpplg'N{pej . 'Mcvk'Tlej ctf u.'P gmg'F qwi rcu. cpf 'Nk{ 'Lghgt {

Gpxktqpo gpvcn'Uwf kgu'Rtqi tco . 'Dquvq'Eqmgi g.'Dquvq. O C.'24689.'WUC

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Igppkgt'Tgdgeec'Uej cwtg.'649'O eI wkpp.'F gr ctvo gpvqh'Uqekmqi {.'Dquvq'Eqmgi g.'Dquvq. O C'24689=[ngm{ clhB deQf w](#)

Authors' Contributions

CT.'CN.'MT.'P F.'cpf 'NL'f guki pgf 'vj g'r tqlgev'cpf 'eq/y tqvg vj g'o cpwuetkr 0

Running Title

Xlgy u'qp'Ugpkpeg'cpf 'Eqpugtxcvqp

Keywords

Ugpkpeg="eqpugtxcvqp="dkqf kxgtuk{ =y kf rkg="eqgz kvgpeg

Word Count

; 54:

Article Impact Statement

Vj ku'r cr gt'kf gpvkhgu'cpf 'o gcuwtgu'oj wo cp'r gtegr vqpu qh'cpko cn'ugpkpeg.ö'kpvkmp'i "cp go qvqpcn'cr r tqcej "v'ghgvevqpu'qp'y kf rkg'kpvgtcevkpu. eqpugtxcvqp."cpf "dkqf kxgtuk{0

Acknowledgements

Vj g'tgugctej gtu'y qwf 'hmg'v'vj cpn'Rtqhguuqt'Igppkgt Uej cwtg.'vj g'Gpxktqpo gpvcn'Uwf kgu r tqi tco . 'Rtqhguuqt'Vctc'RkucpkI ctgcw.'qwt'hgmty Ugpkqt'Tgugctej "Ugo kpc't'encuo cvgu."cpf "qwt r ctvkr cpw'hqt'vj gk'eqpvtkdvwkqpu'v'qwt'uwf {0

Introduction

Vj g'tgrvkvpuj kr "dgy ggp"j wo cpu'cpf "pqp/j wo cp"cpko cnu j cu"gxqkxgf "vj tqwi j qw"j kvqt {
cpf "xctkgu'dgy ggp"ewmwgu."eqo o wpkkgu."cpf "kpf kxf wcn0Ur gekkccm{."j qy 'r gqr ng'xkgy "cpf
xcnwg"pqp/j wo cp"ugpvkgepeg"j cu'dggp"e"vqr ke"qh'tgugctej co qpi "uej qrtu0Lcpg"l qqf cm'y cu'qpg
qh'y g'htuv'gzzr gtu'vq"l kuo cpvng"vj g'r qr wct"eqpegr vqh'y g'f lej qvqo { "dgy ggp"j wo cpu'cpf
cpko cnu'd { 'r tqxkpi "vj cv'vqqr/wug."ewmwg."cpf "go qvkvpcneqppgekvqp"ctg'pqv'wpls wg"vq
j qo qucr kgpu0Uj g'lw i guvgf "vj cv'vj qug'y j q"j cxg'ur gpveqpukf gtcdr'vko g'y kj "cpko cnu'tgeqi pk g
vj cv'qwt"pqp/j wo cp"eqo r cpkqpu"cpf "y kf rkhg'r quuguu ugpvkgepeg0Uj g'ct vkwrcvgf "vj cv'vqpege" { qw
ctg'r tgr ctgf "vq"cf o k'vj cv'cpko cnu'ctg'ugpvkgepv'cpf ecppqv'qpn { "hpqy "go qvkvpu'rkng"j cr r kpguu.
ucf pguu."hgct."dw'gur gekcm { "vj g { "ecp'hggn'r clkp"o vj gp."cu"j wo cpu'y kj "cf xcpegf "tgcupkpi
r qy gtu."y g"j cxg"e'tgur qpukdkkv { "vq"tgecv'vj go "kp o qtg"j wo cpg'y c { u'vj cp'y g'vq'qh'v'p'f qo"lcp
I qqf cm'l kvukwng."423; +0Dgecwug"j wo cpu'r r { "c'rti g tqrg"kp"pqp/j wo cp"cpko cnu'eqpugtxcvkv.
vj g'gzv'p'v'v'q"y j lej "j wo cpu'w'p'f gtuw'cpf "cpf "gzzr g'kgepeg ugpvkgepeg"co qpi "pqp/j wo cp'dgkpi u'o c {
ko r cev'vj g'hwmtg"qh'eqpugtxcvkv"cpf "vj g'hwmtg"qh'j wo cp/y kf rkhg'kvgtcekvpu"cpf "eqgzkvgepeg0
k'v'gegpv' { gctu."gzzr gtu"j cxg"ecmgf "hqt"vj g'f kuo cpv'kpi qh'tcf kvkpcn'dkpc'kv'dgy ggp"j qo q
ucr kgpu'cpf "pqp/j wo cp"cpko cnu" | f go k'lw i guw'y g dtgcm'y g'dkpc { "dgy ggp"j wo cpu'cpf
pqp/j wo cp"cpko cnu'cpf "dgy ggp"j wo cpu'cpf "pcwtg'y kj i qxgtcpeg"htco gy qtm'rkng"oQpg
P cwtg0"Uwej "c'r ctcf ki o "ecm'hqt"j wo cpu'vq"o qxg dg { qpf "cp'y tqr qegpv'ke"y c { u'qh'vj kpnkpi
cpf "qr gtcv'kpi "y kj kp"vj g'i mdcn'gequ { ugo 0Vj ku'dgi kpu y kj "tgeqi pk kpi "cpko cnu'ugpvkgepeg
* | f go kt."4242"2

Problem

Cu'j wo cpu"eqvkwg"q"gpctqcej "w qp"pcwtcrif cdkcw.

ugpvkpv'dgkpi u'lp'qtf gt'vq'tgeqi pk g'qwt'eqo o qp'r meg'qp'Gctvj 0Y kj lp'vj ku'eqo o wpkv'ugvki .
y g'y cpv'q'hqvg't'o gcpki hwt'ghgevkpu'cdqw'j wo cp/cpk cnkpvgtcev'qpu'vj cv'y knkphwpeg
r ctvek cpw'qy p'nxgu0k'qwt'ecm'hqt'y tkwgp'pcttcv'xgu. y g'ctg'j qr kpi 'vq'j cxg'cp'ko o gf kvg
ghgev'qp'dqj 'vj g'tgugtej gtu'cpf "'vj g'r ctvek cpw0Dwrf kpi 'qh'h'qh'Tlej ctf uqp'kf gcu.'vj g
tgugtej gtu'dgn'xg'vj cv'y g'y tkkpi 'r tqegu'y knkpk'cv'f kvexgt { 'hqt'vj g'r ctvek cpw.'kpv kt g
eqppgev'qp'dgy ggp'j wo cp'r ctvek cpw'cpf 'ugpvkpv'k'g.'cu'y gml'cu'r tqf weg'o gcpki 'cpf 'etgcv
pgy 'cy ctgpgu'qh'tgcrk' 'lp'vj g'r tqegu'*Tlej ctf uqp. 4223-0Vj g'tgugtej gtu'cempqy ngf i g'vj cv
y tkkpi 'ecppqv'dg'wv'k'p'gf 'h'qo 'vj g'h'g'g'zr gtlgpegu qh'vj qug'y d

vq'cempqy rñfi g'cpf 'uj ctg'vj g'r gtuqpcnr gtur gevkgu'qh'cm'tgugctej gtu'kpxqkxgf . 'j g'gk0Gcej
cwj qt'dtkpi u'wpls w'g'zr gtlgpegu."gf wecvkqp."cpf "go qvqp vq'vj g'vcdrg0Uj ctkpi "vj gug'r gtur gevkgu
etgcvgu"o qtg'qr gp'cpf 'r gtuqpcnr'eqppgevkqp"dgwy ggp vj g'tgugctej gtu'cpf "vj g'tgcf gtu0k'vj gk
y qtm'Vtgxgu'cpf "eqmgi wgu'kpenf g'c'ugevkqp'y j g'g vj g{'cempqy rñfi g'cpf 'uj ctg'vj gk'xct{kpi
qr kpkpu'cpf 'xky r qkpw'qp'vj g'vqr k'qh'r tgugtxcvkqp0Vj g'cwj qtu'uj ctg'vj cv'y j k'vj g{'cm'tg
r cuukqpcv'cdqw'vj g'uwdlgev'cpf 'ctg'eqpvtkdwkpi kvmgewcneqpv'v'vj g'ctveng."vj g{'ctg'pqv
cm'r gthgevf 'crki pgf 'k'vj gk'xky u'qh'pqp/j wo cp cpko cn'tki j u'Vtgxgu'gv'cr0"423; +0Uko krcn(.
y g'j qf 'xct{kpi "qr kpkpu'cpf "dgrkhu'qp'vj g'vqr k'qh'pqp/j wo cp'cpko cn'ugpvkpeg'cpf
eqpugtxcvq0Vj wu."Vtgxgu'cpf "eqmgi wgu'j cxg'kpur k'gf vj ku'ugevkqp."y j k'j 'y g'j cxg'ej qugp'vq
f gf kcv'v'vj g'r gtuqpcnr'pcttcvkgu'qh'vj g'tgugctej gtu0

Lghgt { "dgrkxgu'vj cv'f geqputwekpi "vj g'f ggr n{/tqqvgf . j k'ctej kcn'tgrvkpuj k' "dgwy ggp
j wo cpu'cpf "pqp/j wo cp'cpko cn'ku'guugv'cr0Grko k'vkpi vj gug'r tgeqpegkxgf "pqvqpu'qh'j wo cp
uwr gkqtkv'cpf "rcpki "k'vj g'ugpv'pcwtg'qh'cm'dgkpi u'y kn'cmqy "cm'ur gelgu'v'eqgzku'qp
Gctvj "k'c'eqo r cuukqpcv'g'o cpgt'cpf "t'gf weg'vj g'ugxgtg j cdkcv'f kutw vkqp'cpf "uwdugs wgpv
dkqf kxgtukv' "quu'y g'ewtgpv' "hceg0

F qwi r'cti wgu'vj cv'ugpvkpeg'ku'vj g'utqpi gu'eqppgevkqp uj ctgf "dgwy ggp"j wo cpu'cpf
pqp/j wo cp'cpko cn'="vj wu."k'ku'vj g'f w' "qh'j wo cpu vq'tgeqi pk' g'vj cv'uj ctgf "ugpvkpeg'ku'k'f k'gev
eqph'ev'y k'j "cpvj tqr qegpvtkuo . 'y j k'j 'j cu'f tkxgp'vj g'f gutwevkqp'qh'pcwtcn'j cdkcv'0Y j k'g
eqpegr wu'qh'ugpvkpeg'o c { "dg'vq'cdutcev'cpf "hqtgki p hqt'uo g'k'f k'f wcu'v'qr gpn' "go dtceg.
Tgkm' "ci tggu'y k'j "F qwi r'cti wgu'vj cv'cwkwf gu'vqy ctf u j wo cp/cpko cn'tgrvkpu'o wu'dg'tgeqpvk'gtgf
d { "vj g'eqo o qp'r qr wcvkqp'hqt'tgcn'eqpugtxcvq'v' qeew0Tgkm' "hgnu'vj cv'cpvj tqr qegpvtkuo "ku'ug
f ggr n' "kpi tckpgf "k'v'f c { "u'qekv'gu'vj cv'k'f k'f wcu o c { "pggf "v' g'v'ceen'cv' "v'vj g'uj k'kpi

r ctf ki o . "qt "gnug" yj g { "o c { "t glgev" yj gug" kf gcu" qwt ki j 0Vj wu. "T gkm { "hggnu" yj cv" yj g" dguv" cr r tqcej "ku
vq" gcug" r gqr rg" kp" vq" yj gug" f kuewu kqpu. "gur gekm { kh" yj g { "ctg" vphco kktct" y kj " yj g" vqr leu0

N { pej "ku" eqo r gmgf "vq" f geqpust wevf qo kpcpv" ur gekgu ecvgi qtkgu" cpf " y qtmci clpuv" yj g
j wo cp" gzege vqpcrkuv" htco gy qtn0Kpur ktf "d { " yj g" y qtmqh" Mktmug { "cpf " J gm tglej " *4232+ " N { pej
j qr gu" vq" dtkpi "kp" r gtur gevkgu" qh" gs wcrk { . "tgr nceki yj g" rpi wci g" qh" pqpj wo cp" ur gekgu" y kj
o wkur gekgu" wpf gtucpf kpi 0Cf f kkpccm { . "k" ku" ko r gtcvkg vq" cf xcpeg" qwt " Y guvtp" r wdrk
wfp gtucpf kpi "qh" cpko cn'ugpvkpeg" dg { qpf " wkrkctkcp xcncvkgp" qh" ur gekgu. "cpf " vqy ctf u" cp
wfp gtucpf kpi "qh" o wkur gekgu" cu" i qpf "vq" rkg" y kj . cpf "co qpi " *Mktmug { "cpf " J gm tglej . "4232+0

Tlej ctf u" dgrkgxu" yj cv" yj g" dkpctkgu" yj cv" gzku" vgr ctcvki pqpj wo cp" cpko cnu" htqo " j wo cpu
ctg" j cto hwnht" cm' ur gekgu0K" ku" kp" cm' ur gekgu dguv" kpvgt guv" yj cv" uwej " dkpctkgu" cpf " j kgtctej kgu" ctg
f kuo cpvrgf " dgecvug" cm' rkgu" j cxg" kpj gtgpv" xcncvkg0Tlej ctf u" j qr gu" yj cv" gpi ci kpi "kp" etkccn' cpf
gptlej kpi "eqpxgtucvkgpu" cdqw" cpko cn'ugpvkpeg" ku cp" ko r qtcvpv" vgr "kp" dtgcnkpi " f qy p" yj gug
vcf kkpccn' dctt kgtu0

Trends in Existing Literature

Vj g" gzku" kpi "dqf { "qh" t" guctej "gzi rqt gu" yj g" tqrg" qh" xcncvkgu. "cvkwf gu. "cpf " f kt gev" kpvgtcevkgpu
qp" yj g" tgrcvkgpuj kr "dgy ggp" j wo cp" cpf " pqpj wo cp" etgcwtgu. ekk gp" o qpkqt kpi . "cpf
eqpugtxcvkgp" r tcevkgu0Vj gtg" ctg" c" xctkgy { "qh" t" gpf u gur gekm { "ucnkgpv" vq" hwwt g" t" guctej "qp" yj g
tqrg" qh" ugpvkpeg" kp" o qkxcvkgpu" htq" dgwgt" t" gcvo gpv" qh" y kf rkhg0P wo gtqwu" uwf kgu" j ki j rki j v" yj g
ko r qtcpeg" qh" eqo r cuukap" kp" j wo cp" cvkwf gu" vqy ctf u y kf rkhg. "tgr qt vki "go qkqpcn' xctkcdrgu" cu
yj g" utqpi guv" r tgf kevqt" qh" y kf rkhg" o cpci go gpv" qhj qwug" ur cttqy u=cpf . " yj cv" j wo cp" go r cvj {
vqy ctf "cpko cnu" cpf " utqpi gt" hggkpi u" cdqw" ugpvkpeg o c { "rgcf "vq" dgwgt" t" gcvo gpv" qh" cpko cnu
*Nctupq" gv" cr0"4238=Eqt pkuj "gv" cr0"423: +0Go r cvj gve tgcvo gpv" qh" cpko cnu" gzvgpf u" vq

r gtur gevkg"FF qnd{. '4242+0F qnd{ au'go r j cuku'qp'go r cvj { 'kp'j gt'uwwf { 'cpf'j gt'wug'qh'eqmgi g
uwwf gpw'cu'r ctvkr cpw'ctg'vy q'vj kpi u'y gdf 'hkg vq'o kttq'kp'qwt'uwwf {0Y cmcej 'cpf'eqmgi wgu
cti wg'hqt'vj g'ko r ngo gpvkvq'qh'eqo r cuukqpcvg'eqpugtxcvkvq. c'hqto 'qh'eqpugtxcvkvq'kp'y j lej 'cm
pqp/j wo cp'cpko cn'uwldgeu'ctg'tgcvgf 'cu'ugpvkpvdgkpi u'cpf'ctg'uggp'hqt'vj gkt'kptkpuke'xcnwg
*Y cmcej 'gv'cn0'423: +0Vj g'cwj qtu'uwwf kgf 'xctkqwu ecugu'qh'cpko cn'eqpugtxcvkvq'cpf'etkks wg'vj g
y c{u'vj g{ 'ki pqtg'cpko cn'ugpvkpeg'cpf'cev'y kj 'cp cpvj tqr qegpvk'ugv'qh'i qcm'*Y cmcej 'gv'cn0
423: +0Y j kg'y g'y kn'pqv'dg'cpcn{ kpi 'ewttgpv'eqpugtxcvkvq ghqtu.'y g'y kn'dg'kpxguki cvkpi 'vj g
tgrcvkpuj k' 'dgw ggp'xkgy u'qp'pqp/j wo cp'cpko cn'ugpvkpeg cu'k'tgrcvgu'vq'cwkfw gu'vy ctf u
eqpugtxcvkvq00 cphgf q'cpf'eqmgi wgu.'y tqwi j 'vj gkt cpcn{ ulu'qh'uqekqewmwcn'xcnwgu'qp'y kf rkhg
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qwt'f cv'eqmgevkvq'r gtlkf 'y g'cko 'v'hquvt'c'y cto cpf'ceegr vki 'gpxkqpo gpv'hqt'vj g
r ctvkr cpw'kp'qwt'f kuewukp'i tqw 'y j gtg'vj g{ 'y kndg'kpxkgf 'v'twn{ 'gZR mgt'vj gkt'vj qwi j u'cpf
hgkpi u'cdqw'cpko cn'ugpvkpeg0Uko kctn{ 'v'F qnd{. y g'y kn'gpeqwtci g'r ctvkr cpw'vq'r w
vj go ugrkgu'kp'vj g'qvj gt'dgkpi au'r neg'cpf't{ 'v'kpvgr tgvcpf'tgegkg'vj gkt'gpgti { 'cpf'go qvkvu0
Y g'y kn'r tqo r v'vj g'uwwf { 'r ctvkr cpw'vq'vj qwi j vwn{ tghgev'wr qp'vj gkt'kpvgtcevkvpu'y kj
pqpj wo cp'y kf rkhg'cpko cu0Y g'y cpv'vq'ecm'cwgpvkvq vq'vj g'wpls wg'gpgti gke'dqpf 'vj cv'ku'uj ctgf
dgw ggp'vy q'ugpvkpvdgkpi u0Y g'y kn'gpeqwtci g'qwt r ctvkr cpw'vq'dtkpi 'cp'gxgt'r tguvpv
cy ctgpguu'qh'eqpuekvwupguu'vj cv'cm'hkxkpi 'etgcwtgu r quuguu0Y g'j qr g'vj cv'vj ku'j gli j vpgf
cy ctgpguu'ecp'rgcf 'v'o qtg'o gcpkpi hwnf kuewukp. tghgevkvq.'cpf'eqpvkpwgf 'o wwm{ 'dgpghkcn

r ctvkr cpw'vj tqwi j "eqpxgplgpeg"uco r npi . "cu'vj g'tgugctej gtu'lwtxg{ gf "cwgpf ggu'vq"cp"cpko cn
y gntctg'u{o r qukwo "423: +0Kp'dqvj "uwf lgu."r ctvkr cpw j cf "ctgcf { "f go qputcvgf "c'uki pklcepv
kpvgtguv'lp"cpko cni'cpf "cpko cni'y gmlgkpi . "y j lej 'ko r cevgf tguwu"*Nctuqp"gv'cni"4238=Eqtpkuj "gv
cni"423: +0Qwt'uwf { "y km'dg'htqo "c'o qtg'o kzgf "dceni tqwvf qh'r gqr ng'y kj "xctkqu'kpvgtguu."pqv
lwv'ko kgf "vq'r gqr ng'y j q"ctgcf { "uj qy "ur gekni'kpvgtguv'lp"cpko cni

Areas for Further Study

Y j kg'vj g'rkgtcwtg"qp'y kf rkhg"eqxgtu'dqvj "c'tcpi g qh'uwvqr leu'cpf "eqpukf gtcdrf" f gr vj
kp'ur gekle"ctgcu."uki pklcepvi cr u'r gtukn0Ur geklecm{ . vj gtg'ku'o wej "vq'dg'uwf kgf "qp'vj g
r gtegr vkp"qh'cpko cni'ugpvkpeg'd{ "j wo cp'dgkpi u."j qy vj ku'ko r cevu'j wo cp/cpko cni'grvkpuj kr u.
cpf "y j cv'ghgevu'vj ku'j cu'qp"eqpugtxcvkp"ghqtu cpf "cy ctgpguu0Nctuqp"cpf "eqmgci wgu'cpcni'uku
qh'gzr gtlgp'kni'hcexqtu'uw r qt'u'vj g'dgrkh'vj cv'gzr gtlgpegu y kj "y kf rkhg'utgpi vj gp"chgevkxg"cpf
go qvkpcni'tgur qpugu'vq'y kf rkhg'uko wk"*Nctuqp."gv'cni"4238+0Vj ku'uwf { "qr gpu'wr "cp'ctgc'ht
tgugctej "qp'vj g'tqg'qh'wvf gtucpf kpi "cpf "cr r tgekvkq qh'ugpvkpeg'ht"vj g'htto cvkq"qh
go qvkpcni'f kur quk'kpu'cpf "cvkwf gu'vqy ctf "y kf rkhg0Vj g'y qtn'qh'Eqtpkuj "cpf "eqmgci wgu
ulo krcni' "etgcvgu'vj g'r qvgv'kni'ht'hw'vj gt'tgugctej qp'y j cv'gzcew' "o qv'xcvgu'r gqr ng'vq"eqppgev'vq
cpko cni'ugpvkpeg"*423: +0Y j kg'vj g'tgugctej gtu'gzco kpg f go qi tcr j le'hcexqtu'vj cv'kphwpeg

r t g x l q w u n { ' d g g p ' c w g o r v g f ' k p ' q v j g t ' t g u g c t e j 0 Y g ' y k n l r t q o r v ' j g ' u w f { ' r c t v l e k r c p w u ' v q
v j q w i j v h w m { ' t g h r g e v ' w r q p ' v j g k ' k p v g t c e v k a p u ' y k j p q p j w o c p ' y k f r k h g ' c p k o c n u 0 Y g ' y c p v ' v q ' e c m
c v g p v k a p ' v q ' v j g ' w p k s w g ' g p g t i g v l e ' d a p f ' v j c v ' k u ' u j c t g f d g w y g g p ' y q ' u g p v k e p v ' d g k p i u 0 Y g ' y k n
g p e q w t c i g ' q w t ' r c t v l e k r c p w u ' v q ' d t k p i ' c p ' g x g t ' r t g u g p v c y c t g p g u u ' q h ' e q p u e k q w a p g u u ' v j c v ' c m ' h k k p i
e t g c w t g u ' r q u u g u 0 Y g ' j q r g ' v j c v ' v j k u ' j g k i j v g p g f ' c y c t g p g u u e c p ' r g c f ' v q ' o q t g ' o g c p k p i h w n
f k u e w u k a p . ' t g h r g e v k a p . ' c p f ' e q p v k p w g f ' o w w c m { ' d g p g h e k e n k p v g t c e v k a p u ' d g w y g g p ' q w t ' u w f {
r c t v l e k r c p w u ' c p f ' c p { ' p q p j w o c p ' y k f r k h g ' c p k o c n u ' v j g { o c { ' g p e q w p v g t 0

Research Question

Y j c v ' o q v k c v g u ' r c t v l e k r c p w u ' v q ' e q p p g e v ' v q ' c p k o c n u ' u g p v k e p e g . c p f ' j q y ' e q w f ' v j k u
o q v k c v k a p ' r g c f ' v q ' d g w g t ' t g c w o g p v ' q h ' y k f r k h g ' A Y g j q r g ' v q ' c f f ' v q ' g z k u k p i ' h v g t c w t g ' d { ' h k k p i ' v j g
i c r u ' e q p e g t p k p i ' v j g ' g o q v k a p c n i k o r c e v ' q h ' y k f r k h g ' k p v g t c e v k a p c p f ' c e v k a p c d r g ' g h g e w ' v j k u ' j c u ' q p
j w o c p ' d g k p i u ' v q y c t f u ' e q p u g t x c v k a p ' c p f ' y k f r k h g ' j c d k c v r t q v g e v k a p 0 K g c m { . ' y g ' y k n i k f g p v k h {
r c w g t p u ' c p f ' t g p f u ' k p ' y k f r k h g ' k p v g t c e v k a p u ' v j c v f g o q p u t c v g ' g h g e v k g ' y c { u ' v q ' g p e q w t c i g

qwt'r ctvlek cpwøqxgtcm'gzr gtlgpeg'y kj 'yj g'uwwf {0Dquxqp'Eqrngi g'uwwf gpw'ctg'wpls wg'lp'yj gk
cdkxv\ 'vq'tghgeev.'eqo o wplkcvg.'cpf "go r cvj k g'y kj qyj gtu0Cm'Dquxqp'Eqrngi g'uwwf gpw'ctg
tgs wktgf 'vq'eqo r rvg'yj g'Eqtg'Ewtkewwo 'y j lej 'hqvgtu etklecn'yj kpnkpi 'unkm'cpf 'yj g'cdkxv\ 'vq
eqo r cuikqpcvgn\ 'eqo o wplkcvg'kf gcu00 qtgqxtg.'yj g'Lguwkvxcnwgur tqo wni cvgf 'yj tqwi j qw
Dquxqp'Eqrngi g'r ræg'c'utqpi "go r j cuku'qp'ugtxleg vq"qyj gtu'cpf 'y qtnkpi 'vq'o cm

Data Collection Methods

Rctvlekr cpwu'y gtg'lpwxkgf 'xlc'vzv.'go ckn'y qtf/qh'o qwj . cpf 'uqekcn'o gf kc'vq'r quv'y gk
y kf rkhg'lpvgtcevkpu'v'y'j g'Hcegdqqm'i tqwr 0Rctvlekr cpwu y gtg'cungf 'vq'uj ctg'pcttcvxgu.'r j qvqu.
xkf gqu.'qt'cwf kq'hkgu'cpf 'r tqo r vgf 'vq'tghge'v'qp vj g'go qvqpcn'g'zr gtlgpegu'qh'y gk'y kf rkhg
lpvgtcevkpu0C"eqo o qp'dcttktg'hqt'ekkl gp'uekgpeg tgugetej 'ku'uwuclkgf'gpi ci go gpv'cpf
eqo o ko gpv'qh'r ctvlekr cpwu'Rcrgeq'gv'cn0'4243+0Y g'clo 'vq'c'f f tguu'v'j ku'ej cmgpi g'd{ 'qhhgtkpi
o wnk'rg'r tq'ge'v'gpv' { 'r qkpw'cu'y gm'cu'o wnk'rg y c{ u'vq'r ctvlekr cvg'cv'f khhgtgpv'rgxgnu'qh
eqo o ko gpv'lp'y'j g'Hcegdqqm'i tqwr "Rcrgeq'gv'cn0'4243+0Gzco r ngu'qh'r ctvlekr cvkqp'dg{ qpf
r qukpi 'kpenf g'lpvgtcevkpi 'y kj 'qyj gt'r quu'v'j tqwi j rkgu'cpf 'eqo o gpwu.'y cvej kpi 'rkxg'utgco
xkf gqu'j quvgf 'd{ 'v'j g'tgugctej gtu.'cpf 'tghgtkpi 'qyj gt r ctvlekr cpwu'v'y'j g'i tqwr 0F cv'e'qmgv'kqp
dgi cp'qp'Qevqdg't36.'4242'cpf 'eqpenf gf 'qp'Cr tk'i36. 42430

Data Analysis

Cp'guugpvlekr' ctv'qh'qwt'f cvc'cpcn{ uku'o gj qf 'ku'eq/etgcvkqp. y j lej 'cmqy u'qwt'uwf { 'vq
dwnf 'c'tlej 'pcttcvxg'dgy ggp'v'j g'r ctvlekr cpwu'cpf vj g'tgugctej gtu'D3/kluj /Dtgf plej .423: +0
D3/kluj /Dtgf plej 'go r j cuk' gu'v'j cv'wpeqpxgpv'kpcn'o gj qf u'qh'pcttcvxg'gy pqi tcr j { 'ctg'lp
v'pukqp'y kj 'v'j g'pggf 'hqt'gy pqi tcr j le'tgugctej 'vq dg'v'cmgp'ugt'kwun{ 'cu'c'v'qekcn'uekgpeg
*D3/kluj /Dtgf plej .'r 0; .423: +0Y j kg' { gv'c'pcttcvxg dguv'ecr wt'gu'v'j g'go qv'kpu'g'zr tguugf 'd{
r ctvlekr cpwu'tgi ctf kpi 'v'j gk'y kf rkhg'lpvgtcevkpu. cpf 'ku'o quv'tvg'v'y'j g'pcwt'g'qh'ugpv'kgpeg0
Hw'vj gto qtg.'qwt'o gj qf u'hqmqy 'cp'lpw'kxg'cpcn{ uku cr r tqcej 'cu'qr r qugf 'vq'cpcn{ v'ecr'eqf kpi
qh'y g'f cvc0D3/kluj /Dtgf plej 'chko u'v'j cv'y j kg'okv'ku'vgo r vpi 'vq'wtp'uv'qt'kgu'lpv'f cvc'cpf
f gxcnwg'v'j g'cev'qh'f ggr 'huv'gkpi 'cpf 'pcttcvxg'eqpvgo r r'v'kqp.ö vj g'r tqegu'qh'qtf gkpi 'uv'qt'kgu
lpv'pcttcvxgu'ku'dguv'i wkf gf 'd{ 'c's'wcr'kcv'xg'cr r tqcej vj cv'f qgu'pqv'mug'v'j g'go qv'kpu'lp'y'j g

r ctvkr cpvau'uvqtkgu'd{ 'f kuugevki 'vj go '*D3pkuj /Dtgf plej . 'r 032."423: +0Qwt"cpcn{ uku'go r j cuk gu
kpwkxg'y kuf qo u'y j kg'go r mq{ kpi 'tgugctej "eqpxgpvkp y j gp"cr r tqr tkvg0

Vj g'f cv'y cu'cuuguugf "wukpi "c'ugtkgu'qh's wrkcvxg s wguvkpu'vj cv'eqpukf gt'vj g'go qvkpu
cpf "ugpvkpeg"dgj kpf "vj g'uvdo kwgf 'r j qvqi tcr j u.'xkf gqu. cpf "cwf kq'tgeqtf kpi u0S wguvkpu'vj cv
i vkf g'qwt "f cv'cpcn{ uku'kpenwf g<y j cv'v{ r g'qh'y kf cpko cn'ku'uj qy p'AY j cv'ku'vj g'eqpvz v'qh'vj g
r j qvq'AY j cv'f qgu'vj g'eqo r qukkp"qh'vj g'r j qvqi tcr j uc{ "cdqw'vj g'tgrvkpuj k "dgwy ggp'vj g
r gtuqp"cpf "vj g'cpko cn'AY j cv'ecr vkpu'cpf "uvqtkgu'ctg kpenwf gf AY j cv'go qvkpu'f'vj g

O gfk'V{r g	
Rj qvq	39
Xlf gq	5
P qpg	3
Eqmgi g'Cwgpf gf	
Dquqp'Eqmgi g	35
Qvj gt	6

Trends

Trend 1: Key words about animal sentience

Dgecwug'uwwf lgu'kp'vj ku'ctgc'qh'tgugctej 'j cxg'kpxgunki cvgf j wo cp'cempqy ngf i go gpv'qh cpko cnl'ugpvkpeg.'c'ej qugp'vj go g'ht'cpcn'uku'y cu vj g'wug'qh'vj g'y qtf 'ugpvkpeg'qt'c'tgrv'gf cempqy ngf i go gpv'qh'pqp/j wo cp'cpko cnl'go qv'qp'y kj kp vj g'f'guetkdgf 'kpvgtcev'kp0Hqwtvggp.'qt 85085' . 'qh'vj g'r ctv'ekr cpw'eqo o gpv'gf 'qp'vj g'r gte'gk'gf go qv'kpu'qh'vj g'cpko cnl'qt'cpko cni'vj g' gpeqwpv'gtgf 0Vj g'uwwf { 'y cu'cm quv'gpv'kgn' 'eqo r qugf qh'hgo cm'j wo cp'r ctv'ekr cpw'y j kej 'o c' { eqttgr'v'q'vj g'o clqtk'v' 'qh'r ctv'ekr cpw'o cni'pi 'ugpvkpeg/tgrv'gf eqo o gpw'0Eqtpkuj 'cpf eqmgi wgu'hqwpf 'vj cv'hgo cm'g'y gtg'o qtg'rkng'v' 'q' gpi ci g'go qv'kpcm' 'y kj 'pqp/j wo cp'cpko cni '*Eqtpkuj 'gv'cn'0'423: +0J qy gxgt.'pq'r ctv'ekr cpw'gzr r'ekn'v' wugf 'vj g'y qtf 'ugpvkpeg'kp'vj gkt p'cttcv'kxg0Vj gtgh'qtg.'eqo o gpw'qp'cpf 'tgrv'gf 'q'r gte'gk'gf go qv'kqp'cpf 'ur k'k'wcn'l'p'v'gtur gelgu eqppg'ev'k'p'y gtg'eqpukf gtgf 'w'pf gt'vj g'vj go g'qh'ugpvkpeg0

Trend 2: Key words about human emotional experience

Vj tgg'qh'vj g'44'r ctv'ekr cpw'*35085' +y j q'ng'v'p'cttcv'kxg r quw'tgr qt'v'gf 'hggr'kpi 'go r cvj { hqt'cp'qt#

j wo cp'lpvgtcevkqpu'y kj 'y kf rkhg'cpko cnu'cpf 'yj gk'j cdkcuv0Vj gtg'y gtg'ugxgtenr ctvlekr cpwu'y j q
kpf lecvgf 'yj cv'y g{ 'hgn'cr r tgj gpukxg'qt'hgcthwn'cdqww yj gk'lpvgtcevkqpu'y kj 'y kf 'cpko cnu0Vj tgg
r ctvlekr cpwu'qh'y g'44'vqcn'kpf lecvgf 'yj cv'y g{ 'hgn'pgtxqwu'qt'hgcthwn'ctqwpf 'cpko cnu'dw'wy q'qh
yj g'y tgg'tgr qtvgf 'wnko cvgn' 'j cxkpi 'r qukkxg'hggkpi u cdqw'yj g'lpvgtcevkqpu0

Trend 3: Transformative effect of experience

Dgecwug'r tgxkqwu'uwwf lgu'umi i guvgf 'yj cv'r gtuqpcn'gZR gtlgpegu y kj 'y kf rkhg'j cxg'yj g
r qy gt'vq'ej cpi g'j wo cpu'r gtur gevkgu'cpf 'cevkqpu'vqy ctf qyj gt'ur gekgu.'yj g'tgugctej gtu
kpxguki cvgf 'yj g'v'cpuhqto cvkxg'pcwtg'qh'yj g'r ctvlekr cpwu) gZR gtlgpegu'*Nctuqp'g'v'cn0'4238=
F qrd{ . '4242='Ueqw'g'v'cn0'4242-0'Qh'yj g'44'f guetkr vkg pcttcvkgu. ': 'r ctvlekr cpwu*5808' +
gZR rlekn{ 'f guetkdgf 'c'v'cpuhqto cvkxg'ghgevtqo yj gk'gZR gtlgpeg'y kj 'y kf rkhg.'9'r ctvlekr cpwu
*530: ' +lpenmf gf 'pq'tghgtgpeg'vq'c'v'cpuhqto cvkxg'ghgevtqo' yj gk'gZR gtlgpeg.'cpf 'yj g'tgo clkpi
9'r ctvlekr cpwu*530: ' +lpenmf gf 'ko r rlekn'tghgtgpegu vq'yj g'gZR gtlgpegu'eqpvtkdwkp'vq'yj gk'pgy
r gtur gevkg0Ukz'qh'yj g'gki j v'v'cpuhqto cvkxg'gZR gtlgpegu kpxqkxgf 'c'j wo cpw'lpvgtcevkq'p'y kj 'c
ur gekgu'yj g'r ctvlekr cpv'f qgu'pqv'ugg'qt'lpvgtcev'y kj qp'c'tgi wxt'dcuku0Cu'yj ku'tgugctej 'y cu
eqpf wevgf 'kp'yj g'o kf uv'qh'yj g'EQXKF/3; 'r cpf go le.'vy q qh'yj g'gZR rlekn{ 'v'cpuhqto cvkxg
gZR gtlgpegu'lpenmf g'tghgtgpegu'vq'yj g'ko r qtvcpeg'qh'eqppgevkq'p'y kj 'qyj gt'ur gekgu'f wtkpi 'yj ku
r gtlqf 'qh'kuqrcvkp0'Hkxg'qh'yj g'gki j v'v'cpuhqto cvkxg'gZR gtlgpegu'lpenmf gf 'gZR rlekn'tghgtgpegu'vq
r gtuqpcn'cevkq'vqy ctf 'eqpugtxcvkp0Qpg'v'cpuhqto cvkxg'gZR gtlgpeg'j gir gf 'c'r ctvlekr cpv'hgn
r gtuqpcn{ 'eqppgevgf 'vq'y kf rkhg0'Vj gtg'y cu'cp'qxgty j gm kpi v'gpf 'kp'r ctvlekr cpwu'gZR gtlgpegu
ecwulpi 'tghgevkq'qp'o wnkur gekgu'eqgzkvgpeg0'Qh'yj g'eqo dkgf '37'gZR rlekn{ 'cpf 'ko r rlekn{
v'cpuhqto cvkxg'gZR gtlgpegu.'; 'lpenmf gf 'c'tghgevkq qp'eqgzkvgpeg'cpf 'yj g'gh

Vj g'9'r ctvkr cpw'y j q'f kf "pqvtgr qtv'qp'vj g'tcpuhqto cvkxg'pcwtg'qh'vj gk'y kf rkg'g'zr gtlgpegu
uj qy gf 'hgy 'eqo o qpcrkku0"Vj g'ur gekgu'gpeqwpvgtgf cpf 'mcecvkpu'qh'vj gug'pcttcvkgu'y gtg
xctkgf 0Qpg'r ctvkr cpv'r qpf gtu'y j { 'c'upcr r kpi 'wtvrg tgwtpu'v'vj gk' { ctf "qp'cp'cppwcn'dcuku0
ōJ gtgū'o { 'vj qwi j v'ō c { dg'uj g'ej qqugu'qwt'my p'dgecwug y g'j cxg'vj g'qpn' 'pcwtcn'ry p'kp'vj g
pgki j dqtj qqf #AP q'htvkr gt0P q'r guvkr gu0P q'cp { vj kpi ō Cpqj gt'r ctvkr cpv'tgo ctngf "qp'c
ugcn'cdkrk' { 'v'eqgzku'y kj 'j wo cpu'kp'Nc' Lqmc<ō'Kuy co 'kp'vj g'y cvgt'cpf 'y cu'j qpgun'
uwr tkugf 'd { 'vj g'ugcn'rcni'qh'j quvkrk' { 'cpf 'uggo kpi n' f lutgi ctf 'hqt'j wo cpu'uy ko o kpi 'kp'wej
enug'r tqzko kv.ō0"Vj g'r ctvkr cpw'ctg'cdng'v'cempqy ngf i g cpf 'tghgev'qp'vj gk'g'zr gtlgpegu'y kj
qjy gt'ur gekgu.'dw'f q'pqvtgr qtv'cp { 'gxkf gpeg'qh'c ej cpi gf 'cvkwf g'qt'r gtur gevkg'hqmuy kpi 'vj g
kpgtcevqp05"qh'vj g'9'r ctvkr cpw'vj cv'f kf "pqvtgo ctm'qp'tcpuhqto cvkqp'ctg'uwf gpw'qh
Gpxkqpo gpv'cn'Uwf kgu0

Trend 4: Species Type

Qh'vj g'44'f guetkr vkg'pcttcvkgu.'35'r quu'*7; Ō; ' +hgewugf "qp'cp'kpgtcevqp'y kj 'c
vj tgcwpgf "qt'tctg'ur gekgu'vj cv'vj g'r ctvkr cpv'f qgu pqv'eqo o qpn' 'gpeqwpvgt'kp'vj gk'gxgt { f c {
rkg0Vj gug'ur gekgu'kpenf gf 'c'ugc'rkqp.'j wo r dcemy j crgu.'dgctu.'cp'gm'c'f ggt.'ugc'wtvrgu.'dkuqp.
o qwpvcp'i qcvu.'c'vgtter kp.'ugcn.'uy cpu.'cpf 'c'wtvrg { 0Qh'vj gug'35'r quu'hgcwtkpi 'kpgtcevqpu
y kj 'tctg'cpko cnu.'8'r quu'*68Ō7' -'cnu'g'zr rckm' f guetkdgf "c'tcpuhqto cvkxg'ghgev'qp'vj g
r ctvkr cpv'tqo 'vj g'gpeqwpvgt0Qpg'r ctvkr cpv'uckf vj gk'kpgtcevqp'y kj 'c'ugc'rkqp'tgchko gf
vj gk'o qvxcvqp'v'r tqvgev'y kf rkg'cpf 'hcxg'cpko cnu crpg'ōv'f q'vj gk'vj kpi ō Cpqj gt
r ctvkr cpv'y cu'tgo kpf gf "qh'vj g'ko r qv'peg'qh'eqpugt'xcvqp cpf 'vj g'eqgzku'v'peg'qh'j wo cpu'cpf
pqpj wo cp'cpko cnu'chgt'vj gk'kpgtcevqp'y kj 'uy cpu0O qtgqxt.'y q'r ctvkr cpw'vj cv'y tqv
cdqw'vj gk'kpgtcevqpu'y kj 'j wo r dcen'y j crgu'f guetkdgf vj g'gpeqwpvgtu'cu'o cnpki 'vj go 'tghgev
qp'vj g'j wo cp'ko r cev'qp'vj g'gpxkqpo gpv'cpf 'vj g'etvgn'v'gco gpv'qh'y j crgu'kp'ecr vkk'.'cpf

f guetkdgf 'hggrkpi 'kpur ktgf 'v'eqpvkpwg'yj gk'eqpugtxcvkqp'ghqtu0Qh'yj g'; 'r quu'hgcwtkpi
kpvgtcevkqpu'y kj 'o qtg'eqo o qp'cpko cnu.'4'r quu'*4404' +cnuq'f guetkdgf 'c'tcpuhqto cvkxg'ghgev
qp'yj g'r ctvlekr cpv'htqo 'yj g'gpeqwpvgt0Vj wu.'pcttcvkxgu cdqw'gpeqwpvgtu'y kj 'tctg'cpko cnu'y gtg
409'ko gu'o qtg'rkgnf 'v'f'kuewu'c'tcpuhqto cvkxg ko r cev'yj cp'gpeqwpvgtu'y kj 'eqo o qp'cpko cnu0
c0 35'qh'yj g'44'r quu'*7; 0; ' +cnuq'kpenf gf 'c'tghgevkkp qp'eqgzkvgep.'yj g'j wo cp'ko r cev
qp'yj g'uwtxkcn'qh'yj g'ur gekgu.'cpf lqt'yj g'ghgevqh'j wo cp'qt'pqpj wo cp'cpko cnu'r tgugpeg
cu'c'r quukdr'f kuwtdcepeg'v'yj g'qyj gt0Qh'yj g'6'r quu yj cv'heuwgf "qp'eqgzkvgep.'cml'qwt
*322' +y gtg'eqppgevgf 'v'kpvgtcevkqpu'y kj 'tctg'cpko cnu0k'qp'g'r quv'cdqw'o qwpvckp
i qcu.'yj g'r ctvlekr cpv'uj ctgf 'yj cv'yj g'gizr g'kgep o cf g'yj go "otgcrk' g'yj cv'j wo cp'dgkpi u
eqgzkv'y kj 'cpko cnu'cu'y g'uj ctg'yj g'uco g'gctvj 'y kj yj go 0'k'cpqyj gt'r quv.'c'r ctvlekr cpv
yj cv'kpvgtcevgf 'y kj 'dkuqp'gizr m'kpgf 'yj cv'yj g'gpeqwpvgt o cf g'yj go "0vj kpm'yj cv'eqgzkvgep
y kj 'cpko cnu'ku'r quukdr'0'Qh'yj g'8'r quu'yj cv'f gcnv y kj 'yj g'j wo cp'ko r cev'qp'pqpj wo cp
cpko cnu.'5'qh'yj g'8'*72' +r quu'y gtg'eqppgevgf 'v' tctg'ur gekgu0Qpg'r quv'cdqw'ugc'wt vgu
tgo kpf gf 'c'r ctvlekr cpv'cdqw'0vj g'ko r cev'yj cv'j wo cp

cpko cnu'uj ctkpi 'c'ur ceg0J qy gxgt. 'qh'vj g'35'r quu'vj cv'tghngevgf "qp'vj gug'vqr keu'cu'y gmi'cu
eqgz kugpeg. ", 'r quu'"8604: ' +y gtg'htqo 'kpgtcevkpu y kj 'tctg'cpko cnu0

Trend 5: Composition of Photograph

J qy 'f kf 'r tqzko kv 'chgevj' qy 'vj g{'hgn'cdqw'vj g'cpko cnaF kf 'k'gxqng'tgur gev.'hgctA

c0 Y qqf r gengt<õJ g'f kf pø'uggo "vq'o kpf "o g'uvcpf kpi 'uq enqug.'s wkw' 'o guo gtl gf "y j kg

y cvej kpi 'j ko 'j cr r kn' 'y qqf dqt kpi "cy c{=j g'uggo gf 'tcvj gt r tqwf "vq'uj qy 'qhl'j ku

r qy gt/r genkpi "cdk'kgu0K'gn'vj cv'vj ku'y qqf r gengt cewcm' 'hngf 'vj g'cwf kgpeg.'uq"K

hqmqy gf 'j ko "cpf 'hko gf 'j ko 'y j kg'pco kpi 'j ko "Y cngtõ

cemcãcãcbpãcãdã
d0 Gm'õkj gãm'uj puqv'f kgev'g zr g'ej kpi 'j ko 'j cr r kn' 'y cewcg0

- k0 ðVj g'o quv'tgo ctædrg'gZR gtlgpeg'y cu'y kj 'c'i tqwr 'qh'y j crgu'y j lej 'eqo g
 vj tqwi j 'qwt'y cvgtu'kp'O ctej 'cpf 'Cr tkn'gcej '{ gct0Uggkpi vj gug'j vi g'cpko cnu
 tgcml 'r wu'j qy 'uo cm'y g'ctg'kpva'r gtur gevkgö
- k0 ðVj gtg'y g'ftkngf'y j kg'dgkpi 'uwtqwpf gf 'd{ 'J wo r dcemu hqt'y tgg'j qwtuö
- g0 UgcndöCv'j ku'eqxg'qp'yj g'y cvgt.'o cp{ 'ugcni'i cvj gtgf ctqwpf 'v'uwpdcvj g0Kuy co 'kp'yj g
 y cvgt'cpf 'y cu'j qpguwl 'uwr tkugf 'd{ 'vj g'ugcnu'ixemqh'j qukrkv{ 'cpf 'uggo kpi n' 'f kutgi ctf
 hqt'j wo cpu'uy ko o kpi 'kp'uwej 'emug'r tqzko kv{0Vj g'ugcnu y gtg'uwpdcvj kpi . 'uy ko o kpi .
 erko dlpi 'qp'yj g'tqemu.'gplq{ kpi 'vj g'uwp.'gveí "Ky cu ucpf kpi 'uwr gt'emug'v'y q'ugcnu
 y j q'uggo gf 'v'i gv'kp'cp'cti wo gpv'y kj 'gcej 'qvj gt '{ gvf kf 'pqv'gxgp'dcv'cp'g{ g'cv'o g0
 Rtgw{ 'pgcv'j qy 'ceewuqo gf 'cpko cni'ecp'i gv'v'dgkpi pgct'j wo cpuö
- h0 Dwpp{ <ðK'y cupø'o qxlpi 'cv'cm'gxgp'y j gp'Keco g'emug vq'kv'cpf 'kv'y cupø'drkpnkpi lkv
 g{ g'y cupø'o qxlpi 0Kdgi cp'v'i gv'y qttkgf 'cpf 'eqpukf gt vj g'r quukdkkv{ 'vj cv'vj g'dwpp{ 'y cu
 htq| gp'v'f gcvj . 'y j lej 'uectgf 'o g'cpf 'o cf g'o g'hggnuq'uqtt{ 'hqt'k0Ky qwr 'pqv'eqpukf gt
 o { ugrh'cp'cpko cni'ixgt'd{ 'cp{ 'o gcpu.'cpf 'pqto cm{ co 'o qtg'chtckf 'v'i gv'emug'v'cp{
 y kf 'cpko cni'0Rgtj cr u'vj g'hcev'vj cv'vj ku'dwpp{ 'y cu uq'f ghpugrguu'ku'y j cv'o cf g'o g'pqv
 hggv'vj tgcvgpgf 'd{ 'k'dw'tcvj gt'vj kpnkpi 'qh'y c{ u vq't{ 'v'j'j gr 'kö
- i 0 F ggt<ðKmqmgf 'qwukf g'vj g'y kpf qy 'qh'o { 'j qwug'cpf ucy 'c'f ggt'uuctkpi 'cv'o g'cpf
 uqo r kpi 0K'y cu'c'tgcm{ 'co c| kpi 'gZR gtlgpeg'v'u'gg vj g'f ggt'tgeqi pk g'cpf 'kpvgtcev'y kj
 o gö
- j 0 Dkuqp<ðQp'o { 'y c{ 'vj gtg.'Kuvqr r gf 'o { 'ect'v'vcng c'mqm'cv'vj ku'i tqwr 'qh'dkuqp0K
 y cvej gf 'vj go 'hqt'c'y j kg.'cpf 'gplq{ gf 'dgkpi 'kp'yj gk r t gugpeg0Vj g{ 'f kf pø'uggo 'v
 pqv'eg'o g'cpf 'y gpv'cdqw'vj gk'f c{ 'i tcl kpi 'cpf 'y cmkpi ctqwpf ö

10 I qcvu<ōKi qv'c'dk'pgrxqwu'cu'vj g{ 'eco g'emug'v'wu'v'etquu'vj g'r cvj 0Vj g{ 'f'kf 'pqv'uggo vq'o kpf 'vj g'fcev'vj cv'vj gtg'y gtg'r gqr rg'cni'cmipi 'vj g'r cvj . 'cu'iqpi 'cu'y g'f'kf 'pqv'i gv'vqq enqugō

10 Ugc'Nkqp<ōQp'qpg'gzr gf kkp'y g'gpeqwpvgtgf 'c'ugc nkqp'ur tcy rgf 'qp'c'dgpej 'tgukpi 0K uc'vqp'vj g'dgpej 'qr r qukg.'cdqw'8'hggv'cy c{0K'iqmgf wr . 'kf gp'v'k'kf 'o g'cu'c'pqp/vj tgcv cpf 'y gp'v'dcem'v'unggr 0K'eqwf pō'j grr 'dw'pq'v'eg c'r gtuqpcrk'v'v'j ko . 'h'ng'j' qy '{ qw'h'ggn y j gp'v'qwt'g'pcr r kpi 'qp'vj g'eqwej 'cpf 'uqo gqpg'y cmu k'p'uq'v'q'w'iqm'v'r 'dgh'gt'g'i two r kfi q'dcem'v'upqql kpi ō

67067' 'qh'r quu'tghgtgpegf 'j wo cp'r tqzko k'v'v'y kf r'kg ur geku0Ugxgtcn'qh'vj gug'r quu hgcwtgf 'cp'cur gev'qh'tgur gev'kp'vj gk'o gp'v'k'pu'qhr tqzko k'v'v'0Vj ku'kp'wtp'uj qy u'gxkf gpeg'qh eqgzkv'gpeg'kp'vj gug'y kf r'kg'kp'vgtcev'k'pu'vj cv'ku. r gqr rg'cpf 'cpko cni'uj ct'kpi 'c'ur ceg'r gceghm'0 Oqtgqxt. 'vj ku'uj qy u'r quk'x'g'uki pu'qh'c'y k'k'kpi p'guu k'p'vj g'h'w'w'g'v'q'eqgzkv'y kj 'cpko cni'0Vj ku'ku c'ng'v' 'h'pf kpi 'qh'qwt'tgugctej . 'cpf 'ku'c'xgt { 'r quk'x'g kpf kec'v'k'p'vj cv'kp'vgtcev'k'pu'y kj 'y kf r'kg'o c{ eqp't'kdwg'v'q'eqpugt'xc'v'k'p'qh'd'k'qf k'x'gtuk'v'0

Discussion

Trends in Keywords about Sentience

Vj g'vj go g'qh'ugpv'k'gpeg'cpf 't'gr'v'gf 'ng'y qtf u'y gtg'xgt { r t'g'gp'v'kp'vj g'f'cw'vj cv'y cu eqm'gev'gf 0K'p'ugcf 'qh'cun'kpi 'ur gek'k'ecm' 'cdqw'w'pf gtu'v'cpf kpi cpf 'r gtegr v'k'p'qh'cpko cni'ugpv'k'gpeg. qr gp's w'g'v'k'pu'y gtg'r qugf 'v'c'm'qy 'r ct'v'ekr cp'u't'q'qo v'q'uj ctg'r gtur gev'x'gu'cpf 'gzr g'k'g'pegu h'ggn'0E'qtp'kuj 'cpf 'eqm'gci w'gu'r w'd'k'uj gf 'ko r q't'v'pvt'gu'w'w'k'w'o k'p'v'k'pi 'vj g'f'go qi t'cr j ke't'g'p'f u k'p'r gtur gev'x'gu'qp'cpko cni'ugpv'k'gpeg'd'v'w'x'g'f kpi 'c eqm'gev'k'p'qh'r ct'v'ekr cp'u'y kj 'ur gek'k'e s'w'g'v'k'pu'qp'cpko cni'ugpv'k'gpeg'0E'qtp'kuj 'g'v'c'n'0'423: +0Vj g't'gu'w'w'qh'vj ku't'gugctej 'd'w'kf 'w'r qp'vj qug

hpf lpi u'd { 'kmwo kpcvpi 'vj g'xgt dci g'wugf 'vq'f guetkdg'pqp/j wo cp'cpko cni'go qvqpu'cpf 'ugpvkpeg
cpf 'tghphqteki 'vj gk'tguwuu'tgi ctf lpi 'c'eqttgrvqp dgy ggp'hgo cngu'cpf 'go qvqpcr'eqppgevkp
y kj 'pqp/j wo cp'cpko cni'Eqtpluj 'gv'cni'423: -0Hqwtvgg qh'vj g'y gpv{/wy q'r ctvkr cpw'y tqvg
cdqw'vj g'r gtegxgf 'go qvqpu'qh'vj g'cpko cni'kp'uqo g ecr cekv{ 'kpf lecvpi 'cp'cempqy rgi go gpv'qh
pqp/j wo cp'cpko cni'ugpvkpeg0k'qy gt'y qtf u.'o qtg'vj cp j cni'qh'vj g'r ctvkr cpw'kpenmf gf
eqo o gpw'tgrvpi 'vq'cpko cni'ugpvkpeg'y j gp'cungf 'vq uj ctg'c'pcttcvkg'cdqw'c'y kf rkhg
kpvgtcevqp0vj gug'r gtegxgf 'go qvqpu'tcpi gf 'öecro ö vq'öci i tguukxgö'cpf 'vj g'r quw'kpenmf gf
y qtf u'wej 'cu'gzekgf . 'tgrczgf . 'htwutcvgf . 'wpr j cugf . eqpvgr0Qh'vj g'r quw'vj cv'kpenmf gf 'vj gug
ng{y qtf u'cpf 'ugpvko gpw.'vj g'ur gekgu'qh'vj g'cpko cntcpi gf 'htqo 'rjecn'dcem{ ctf 'dglpi u'vq
kpvgtpcvqpcn'tctg'ur gekgu'kpf lecvpi 'vj cv'ur gekgu rkngr{ 'j cf 'pq'ko r cev'qp'y j gj gt'qt'pqv'vj g
r ctvkr cpv'kpenmf gf 'eqo o gpw'qp'ugpvkpeg0O cp{ 'qh'vj g'ur gekgu'ctg'hqwpf 'kp'vj g'Wpkgf 'Ucvgu
dw'rjcevqpu'cnuq'kpenmf gf 'Uy k/ gtrpf . 'Dgto wf c. Dtc| kn'cpf 'vj g'I cnr ci qu0P qpg'qh'vj g
r ctvkr cpw.'j qy gxgt.'wugf 'vj g'y qtf 'ugpvkpeg'kpf lecvpi 'vj cv'r gtj cr u'vj g{ 'gzt gkpeg'cpko cn
ugpvkpeg'y kj qw'j cxkpi 'rgctpgf 'cdqw'vj g'hqto cneqpegr 0F qnd{ 'cti wgu'hqt'vj g'gzt cpukp'qh
gpvktqpo gpvni'gf wecvqp'ur gekk'ecm{ 'tgrcvf 'vq'go r cvj { cpf 'cpko cni'ugpvkpeg'y j lej 'y g'cnuq
tgeqo o gpf 'cu'o cp{ 'r ctvkr cpw'y gtg'pqv'cu'y gmlphqto gf qp'eqpugtxcvqp'cpf 'vj g'go gti lpi
rkgtcwtg'qp'ugpvkpeg'0F qnd{ 'gv'cni'4242-0Gf wecvqp ur gekk'le'vq'vj ku'vqr le'dglpi 'i kxgp'r tkqt'vq
eqpf wevpi 'c'uwf { 'uwej 'cu'vj ku'o c { 'j cxg'ko r rkevqpu qp'tguwuu'cpf 'vgtö kqmqi { 'wugf 0

Trends in human emotion

Vj g'f cv'eqngev'f 'uj qy u'vj cv'j wo cpu'gzt gkpeg'c dtqcf 'tcpi g'qh'go qvqpu'y j gp
kpvgtcevpi 'y kj 'vj g'rkgu'cpf 'ugpvkpv'ur kku'qh y kf rkhg'cpko cni'0Y j gp'r ctvkr cpw'tgr qtvf
hgrkpi u'qh'go r cvj { 'hqt'pqp/j wo cp'cpko cni'vj g{ 'hgrvy gtg'utwi i rki 'kp'uqo g'y c{.'vj g{
o gpvqpgf 'j qy 'vj g'cpko cni'utwi i ng'o cf g'vj go 'vj kmetk'ecm{ 'cdqw'j wo cp'cpf 'pqp/j wo cp

cpko cnlkpvtcevkqpu'cpf lqt'eqpugtxcvkqp0Vj ku'kpf kpi 'tghgeu'vj g'y qtm'qh'*Y cmcej 'g'v'c'0'423: +
k'p'y j lej 'y g'cwj qtu'ucv'vj cv'uwo o qpkpi "eqo r cuukqp ku'ko r qtcv'v'y j gp'y kpnkpi "etkkekcm' "cpf
g'y kecm' "cdqw'eqpugtxcvkqp0Kpvtgukpi n'.'y g'eqo r cuukqp ugxtgn'qh'vj g'r ctv'ekr cpv'u'gnv
kpxqmgf 'c'ugpug'qh'f w'f 'v'q'eqpugt'xg'vj g'rkxgu'cpf y gm'dgkpi "qh'y kf rkhg'cpko cnu0Vj g'o clqtk'f "qh
r ctv'ekr cpv'u'g'zr tguugf 'r qukkxg'hgnkpi u'k'p'vj gkt p'cttcv'xgu'tgeqwp'kpi 'y gkt'g'zr gtlgpegu'y kj
y kf rkhg'cpko cnu0Vj ku'tgp'f 'ku'gzekkpi "dw'pqv'pgegu'ctkn' uwr tkukpi 0O qt'gq'xgt.'uwej 'k'p'f kpi u
ch'kto 'y cv'ek'k' gp'uekgpeg'i tqw u'r tq'x'f g'go q'v'x'g g'zr gtlgpegu'y tqwi j 'gf wecv'kpi 'r ctv'ekr cpv'u'qp
ko r qtcv'p'gp'x'k'qpo gp'v'c'n'v'qr leu'*R'c'geq'g'v'c'f'0'4243+0

Trends in Transformative Narratives

Vj g'tguw'u'hqwp'f 'k'p'vj ku'uwf { 'ctg'eqpukv'gp'v'y kj r t'gx'k'q'w'u'uwf { a'k'p'f kpi u'vj cv
g'zr gtlgpegu'y kj 'y kf rkhg'j cxg'vj g'cdk'k'f 'v'q'o q'v'x'cv'g j wo cp'cev'qtu'v'qy ctf 'go r cvj g'v'ek'cev'k'qpu
v'qy ctf 'y kf rkhg'cpf "ch'ge'v'x'g'cpf "go q'v'k'p'c'n't'gur qpugu v'q'y kf rkhg'u'v'ko w'k'*N'c'tu'qp"g'v'c'f'0'4238=
F qnd { .42420N'c'tu'qp"cpf "eqm'g'ci wgu'hqwp'f 'y cv'g'zr gtlgpegu y kj 'j q'w'ug'ur c'tt'q'y u'r qukk'x'gn'
ch'ge'v'f 'r ctv'ekr cpv'u'v't'g'c'w gp'v'q'h'vj g'ur g'el'gu.'y j lej ku'uw' r q't'v'g'f 'd { 'y g'q'x'g'ty j g'm' kpi 'r q't'v'k'p
q'h'g'zr gtlgpegu'y cv'q'w't'uwf { 'h'q'w'p'f 'v'q'd'g'r ctv'ek'w'c't'n'f v'c'p'u'h'q'to c'v'x'g'0'F qnd { 'h'q'w'p'f 'y cv'y tk'k'p
cp'gu'c { 'h't'q'o 'y g'r g'tur g'ev'x'g'q'h'c'p'cpko c'n'vj g { 'j cf r t'gx'k'q'w'u' "q'd'ug't'x'g'f "eq'p't'k'd'w'g'f
u'ki p'k'h'ec'p'v'f 'v'q'vj gkt'gp'x'k'qpo gp'v'c'n'g'f wecv'k'q'p'cpf go r cvj g'v'ek'eq'p'p'g'ev'k'q'p'v'q'cpko cnu'F qnd { .
4242+0Q'w't'uwf { "eq'p't'k'd'w'gu'v'q'F qnd { a'v'y q't'm'f { 'uj q'y ecukpi vj g'r q'y g't'q'h'g'zr gtlg'p'v'c'n't'g'h'ge'v'k'p
qp'j wo cp'a'eq'p'eg'r v'k'p'u'q'h'c'p'f "eq'p'p'g'ev'k'q'p'u'y kj "q'v'j g't ur g'el'gu'0H'k'h'g'g'p'q'h'vj g'44'*8: Ø: ' +
r ctv'ekr cpv'u'g'k'j g't'ko r r'ek'n'f "q't'g'zr r'ek'n'f "t'g'h't't'g'f v'q'vj g'v'c'p'u'h'q'to c'v'x'g'p'c'w'w'g'q'h'vj gkt'y kf rkhg
k'p'v't'cevk'q'p.'u'wi i gukpi 'y cv'k'p'et'g'c'ug'f 'h't'g's'w'p'e { "q'h'j wo cp/y kf rkhg'k'p'v't'cevk'q'p'u'j cu'vj g'r q'v'g'p'v'c'n
v'q'ko r t'q'x'g'v't'g'c'w gp'v'q'h'q'v'j g't'ur g'el'gu'0"R'ct'v'ekr cp'v'38a'v'c'v'go gp'v'ec'r w't'g'f 'y g'ug'p'v'ko gp'v'q'h
o cp { 'q'h'vj g'i tqw a'v'o go d'g'tu'v'0'Vj g { 'y g't'g'x'g't { 'ec'm' c'p'f "ug'go g'f "s'w'kg'eq'p'v'g'p'v'lw'v'j c'p'i kpi "q'w

qp'vj g'o qwpvcp0Vj ku'gZR gtlgpeg'o cf g'o g'tgcrk g'vj cv'j wo cp'dgkpi u'eqgzku'v'y kj 'cpko cnu'cu'y g
uj ctg'vj g'uco g'gctvj 'y kj 'vj go 0K'r ctvkwct.'tghgtgpegu vq'eqgzku'v'y gtg'j ki j n' r'tgxcrgp0
Vj ku'o c{ 'dg'f wg'vq'j wo cpai'f qo kpcpeg'lp'vj g'pcwctny qtrf . 'qhv'p'ngcf kpi 'vq'ugr ctcv'kp'qh
ur gelgu0'Y j gp'j qo q'ucr kpu'ctg'gpeqwtci gf 'vq'lpvgtcevy kj 'qvj gt'ur gelgu'lp'vj gkt'v' r'lecn
gp'xkqpo gpv.'vj g{ 'ctg'cdng'vq'f geqpuv'wv'vj g'f qo kpcp'vpcw'g/uqekg'v' 'kf gqni' lecn'f kxkf g0
Cempqy ngf i kpi 'vj g'xcnwg'qh'o wnkur gelgu.'cu'lpvtqf wv'gf d{ 'cwj qtu'Mktmug{ 'cpf
J gm tglej *4232+.'kp'qwt'uj ctgf 'gp'xkqpo gpv'ku'c'etwecnu'vgr 'vqy ctf u'l'wuv'r t'gugt'xcv'kp'v'Mktmug{
cpf 'J gm tglej . '4232+0' Cp'qxgty j gm kpi 'o clqtk'v' 'qh'vj g'gZR n'ekn' 'v'c'puh'qto cv'xg'gZR gtlgpegu
qeewt'gf 'dgw'ggp'j qo q'ucr kpg'cpf 'c'ur gelgu'vj g{ 'lpvgtcevy kj 'tctgn'0'Vj ku'o c{ 'uwi i guv'vj cv
ur gelgu'lpvgtce'v'kp'v'ctg'o qtg'r qy g'hw'v'j gp'vj g{ 'eqpvt'cu'v'v' r'lecn'lpvgtce'v'kp'v'0'Hqt'gzco r'ng.
Rctv'ekr cpv'4'y tqv'g'cdq'w'vj gkt'gZR gtlgpeg'y kj 'j wo r'dcemy j crgu'0'Vj g'f c{ 'y cu'qpg'Ky km
hqt'gxgt'tgo go dgt'y kj 'vj g'tcpuegpf gpv'uq'w'p'f u'qh'y j crgu dt'gcej kpi 'pgctd{ 'cpf 'vj g'tgcrk'v' 'qh
y j cv'y g'xg'f qpg'vq'vj gug'y cv'gtu'uk'p'kpi 'lp.0'Vj g r'ctv'ekr cpv'tgr qt'v'gf 'vj cv'vj g'gZR gtlgpeg'j cf 'c
f'kt'gev'lo r'cev'qp'vj gkt'y qtm'cpf 'eqpvt'kd'w'k'p'vq'eqpugt'xcv'kp'v' kpk'cv'x'gu'0' Cf'f'k'k'q'p'cm' . 'ej ctkuo cv'le
gZR gtlgpegu'y kj 'cpko cnu'o c{ 'j cxg'vj g'r qv'gp'v'cn'vq' dg'o qtg'v'c'puh'qto cv'xg'0'Rctv'ekr cpv'33
eqpp'ge'v'f 'y kj 'c'f'gg'0'K'v'dt'qwi j v'o g'em'ugt'vq'y kf r'ng' cpf 'K'hn'o qtg'eqpp'ge'v'f 0'K'v'ngcf 'qh'l'wuv
qdu'gt'x'kpi 'vj ku'cpko c'nt'qo 'vj g'lp'v'kf g.'Ky cu'ce'w'cm' o c'nkpi 'g{ g'eqp'cev'cpf 'dgkpi
cempqy ngf i gf 'd{ 'vj ku'f'gg'0'J wo cpu'o c{ 'dg'o qtg'eqpp'ge'v'f cpf 'o q'v'x'cv'gf 'vq'r tq'gev'ur gelgu
vj cv'gzj kdk'j wo cp'v'ng'v'g'c'w'wt'gu'0'Vj g't'gu'w'u'uj qy vj cv'vj gug'lpvgtce'v'kp'v'ctg'lo r'qt'v'p'v'ht
k'pvt'qf wv'kpi 'o wnkur gelgu'eqpp'ge'v'kp'v'cpf 'ug'p'v'k'peg'0 Vj ku'uwf { 'y cu'ur gel'k'ecm'v' 'lpvgt'g'v'gf 'lp'vj g
gh'gev'qh'vj gug'lpvgtce'v'kp'v'qp'r g'ur ge'v'x'gu'qh'eqpugt'xcv'kp'v'v'j qy g'xgt. 'qpn'v' 'h'x'g'gZR gtlgpegu'j cf 'c
f'kt'gev'v' r'qu'k'x'g'lo r'cev'qp'vj g'r'ctv'ekr cpv'v'eqpugt'xcv'kp'v' kpk'cv'x'gu'0'Vj gug't'gu'w'u'uw' i guv'vj cv
vj gtg'ku'c'ec'w'uc'n'gh'gev'qh'y kf r'ng'lpvgtce'v'kp'v'qp'j wo cpai'r g'ur ge'v'x'gu'qp.'go q'v'kp'v'uj ctgf 'y kj .

tgugtej 'hqt cv'etgcv'cp'k'pvtcevxg'cpf 'o gcpkpi hwi'gZR gtlgpeg'hqt'yj g'r ctvkr cpw. 'k'ecp'dg
kpetgf kdn' 'tcpuhto cvxg'hqt'yj g'tgugtej gtu'cu'Tlej ctf uqp *4223+'j ki j rki j w'cpf 'f luewuugu'cv
ngpi yj 'kp'j gt'y qtn0Cffkkqpcmf. 'wukpi 'c'pqp/tcpf qo eqpxgpkpeg'uco r ng'etgcvf 'c'f kxgtug
r ctvkr cpv'dcug0Vj g'r ctvkr cpv'r qqr'ku'eqo r qugf qh'cm'ci gu'qxgt'yj g'ci g'qh'3: . 'dqy 'eqmgi g
cpf 'pqp/eqmgi g'uwf gpw. 'cpf 'c'o kz'qh'Dquvq'Eqmgi g cpf 'pqp/Dquvq'Eqmgi g'eqo o wpkf
o go dgtu0J cxkpi 'c'f kxgtug'i tqw 'qh'r ctvkr cpw'r tqxkf gf c'y kf g'tcpi g'qh'k'pvtg'w'lp'y kf rkg.
r gtur gevkgu. 'cpf 'gZR gtlgpegu'y kj 'y kf rkg0Wukpi Hcegdqnm'cu'yj g'ej qugp'r r'v'hto 'hqt
eqpf wvki 'y ku'tgugtej 'cmqy gf 'yj g'r ctvkr cpw v' hqugt'eqppgevkpu'y kj 'gcej 'qy gt'cpf 'yj g
tgugtej gtu'k'pugcf 'qh'dgkpi 'dnkf 'v'y j q'yj g'qy gt r ctvkr cpw'y g'g0Vj ku'wps wg'qprkg
r r'v'hto 'r tqxkf gu'c'pgy 'eqv'kdwkq'v'eqo o wpkf dwkf kpi 'k'eqpf wvki 'gy pqi tcr j le.
pcttcvxg'tgugtej 0Vj g'tgugtej gtu'r qugf 'gf wecvkpcnxf gqu'qy ctf u'yj g'gpf 'qh'yj g'f cv
eqmgevkq'r tqegu'v'k'p'hto 'yj g'o go dgtu'qh'yj g'i tqw qh'yj g'tgcuqpu'hqt'yj g'tgugtej 'cpf
gZR r'k'kpi 'hg' { 'eqpegr w'lp'yj g'pqp/j wo cp'cplo cntgugtej ur ceg0Vj ku'cmqi 'y kj 'yj g'k'p'wukq
qh'r gtuqpcn'pcttcvxg'ku'lp'yj g'o cpwetr v'cmqy gf 'yj g' tgugtej gtu'v'eq/etgcv'yj kj 'yj g'r ctvkr cpw
cpf 'gcej 'qy gt 'yj tqw j 'yj g'eqv'kdwkq'qh'r gtuqpcncpgef qv'g0Ukwc'kpi 'yj g'tgugtej gtu'yj kj k
yj g'pcttcvxg'ur ceg'cu'qr r qugf 'v'c'r w'g'qdugtxcvkpcncpf 't'gkgtcvxg'tqrg'ku'y j cv'o cngu
pcttcvxg'tgugtej 'cpf 'gy pqi tcr j { 'wps wg'cu'pqygf d { 'D%pkuj /Dt'gf plej '*423: +0Y j cv'ugw'qwt
uwf { 'cr ctv'ku'yj g'eqv'kdwkq'qh'qwt'xqlegu'lp'yj g' tgugtej 'ur ceg'v'gf wecv. 'k'p'hwpeg. 'cpf
go qv'cmqi ukf g'r ctvkr cpw'lp'v'wg'ugpv'k'p'v'hto 0Vj ku'uwf { 'y cu'r'cti gn' 'cp'qtki k'p'cntgugtej
o gy qf 'f'guki p'yj lej 'cmqy gf 'yj g'tgugtej gtu'v'ckqt yj g'r tqegu'v'ur gekk'f'gukt gf 'qweqo gu
cpf 'ko r necvkpu'hqt'yj g'tgugtej gtu. 'r ctvkr cpw. cpf 'r'cti gt'k'gn' 'qh'y kf rkg'tgugtej 0

Limitations

Y j krg'vj g'f guki p'qh'vj ku'uwf { 'qhhgtgf 'o cp { 'dgpghku'v'vj g'tgugctej . 'vj gtg'ctg'ugxgten cur gew'vj cv'bo c { 'hko k'vj g'cdkxk { 'v'hqto 'f ghpkxkg'cpf 'i gpgtcrk cdr'eqpenwukpu0' Cnj qwi j gzvpukg'ghqtu'y gtg'vcngp'v'kpxkg'kpvgtguvf r ctvlekr cpw'v'vj g'i tqwr . 'vj g'uk' g'qh'vj g'uco r ng y cu'uo gy j cv'uo cm'y kj 'qpn { '44'qh'64'v'v'cnj wo cp r ctvlekr cpw'uj ctupi 'vj gk'g'zr g'kpegu'y kj vj g'i tqwr 0'Vj g'uo cm'uk' g'qh'r ctvlekr cpw'cm'y gf hqt'o qtg'gzvpukg'cpf 'kpenwukg'cpcn { uku'qh pttcvkxgu=j qy gxgt. 'vj g'uco r ng'bo c { 'pqv'dg'tgr t'gugpvcxkg qh'vj g'i tgcvt'j wo cp'r qr wv'kqp0 Cffkxqpcn { . 'vj g'uco r ng'y cu'qxgty j gm kpi n' 'hgo crg. y kj 'qpn { 'qpg'o crg'r ctvlekr cpw'0'Vj g'xcuv o clqtk { 'qh'r ctvlekr cpw'*99049' -'ctg'eqngi g'uwf gpw0Uq. 'vj g'hpf kpi u'o c { 'dg'r tko ctkn { i gpgtcrk cdr'v'v' 'hgo crg'eqngi g'uwf gpw0k'p'v'kpenwukgpguu cpf 'F kxgtuk { 'k'Ekkl gp'Uelkpeg.ö Rcrgeq'cpf 'eqngci wgu'utguu'vj g'tqrg'qh'ekkl gp'uelkpeg k'r tqf wv'kpi 'hpqy r'f i g. 'y j kej 'y g. 'cu t'gugctej gtu. 'etgcvg'vj tqwi j 'qwt'htco kpi 'qh'qwt'pctcvkxgu cpf 'vj g'r ctvlekr cpw'y g'kpenw' g'*Rcrgeq gv'cr0'4243+0k'vj g'r tqeguu'qh'qwt'tgugctej . 'qwt i tqwr 'j cu'go dtcegf 'uwlgevkxg'g'zr g'kpege= j qy gxgt. 'k'ku'ko r qv'cpv'v'v'tgeqi pl' g'vj cv'qwt'kf gpv'v' cu'hgo crg'eqngi g'uwf gpw'eqpvt'kdwgf 'v'c nguu'vj cp'kpenwukg'uco r ng0Ncuw { . 'vj g'qr gp'gpf gf pcwtg'qh'vj g'r tqo r v'rgf 'v'f khhgt'gpegu'k'p eqpv'gpv.'hko k'kpi 'vj g'tgugctej gt'v'ecr cek { 'hqt'f k'geveqo r ct'kuq'qh'r ctvlekr cpv'g'zr g'kpegu0

Implications

Vj tqwi j qw'qwt'uwf { . 'qwt'k'v'gp'v'k'p'y cu'v'v' 'h'qewu'qp eqppgev'kpi 'r gqr ng'ctqwpf 'vj g'kf gc'qh r tqgev'kpi 'qwt'uj ctgf 'gpxk'qpo gp'0'Y g'clo gf 'v'k'puk'ncp'go q'v'k'p'nc'r r tqcej 'v'v'gh'ng'v'k'p'pu'qp y k'f r'k'g'k'p'v'gt'cev'k'p'pu. 'cpf 'd { 'uq'f'q'kpi . 'uj gf 'hki j v'qp'vj g't'g'v'k'p'uj k' 'dgy ggp'r ctvlekr cpw'v' w'pf gtu'w'cpf kpi 'qh'p'qp/j wo cp'c'p'ko cn'ug'p'v'k'peg'cpf 'vj gk'qr k'p'k'p'pu'qp'eqpugt'x'v'k'p'cpf dkqf kxgtuk { 0'Dcugf 'qp'qwt't'guw'u. 'k'p'y j kej 'r ctvlekr cpw' t'gcf kn { 'uj ctgf 'c'y k'f g'x'ct'k'g'v' { 'qh vj qwi j v'v'v'pctcvkxgu'cdqw'vj gk'g'zr g'kpegu'y kj y k'f r'k'g'v'j cv'go dtcegf 'vj gk'go q'v'k'p'pu'cpf

eqo o wplv{ 'eqwf 'uwf { 'y j cv'y g'o quv'ghgevxg'y c{ u'ctg'vq'lpetgcug'cpf 'o clpvkp'gpi ci go gpv
co qpi 'r ctvkr cpw'y kj 'vj gug'vqr leu0Hwwt g'tgugctej gtu eqwf "gxr mtg'kh'uj ct'kpi 'ctvkr gu.
Htgs wgpv{ 'eqo o gpvki 'cpf 'h'kpi 'r quw.'r tqxkf kpi pgy 'r tqo r w'qt "qy gt"eqpvgt'gi wctn{.'wukpi
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References

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Sociology*. 42*4+."383/39; 0

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P cvkpu.'8'O c { '423; .
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hqt'qdugt xgt "dku'lp"ekk gp'uekpeg"o qpkqt kpi "qh'cp"gzr cpf kpi "hcti g"o co o cnl'qr wrcvqp0
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Appendix A.

Recruitment and Informed Consent Message (Sent to participant after joining the Facebook group)

Vj cpm{ qwhqt "{ qwt 'kpvgt gu'kp'r ct vkr c'kpi 'kp'qwt uwf {0Vj tqwi j 'y ku'tgugctej 'y g'j qr g'v'gdwgt wpf gtucpf 'y g'y c{u'j wo cp'hggnkpi u'cdqw'cpko cni'ugpvkpeg cpf 'go qv'kqp'ecp'ko r cev'y g vgcwo gpv'qh'cpko cni'cpf 'cwkwf gu'cdqw'eqpugtxcv'kqp0

Ki{ qw'ci tgg'v'cng'r ctv'kp'y ku'uwf {."{ qw'y kndg'cungf 'v'uwo k'r gtuqpcn'cpgef qv'gu'cdqw"{ qwt kpvgtcev'kpu'y kj 'y kf rkhg0Kp "{ qwt 'tgr qpugu'y g'gpeqwtci g { qw'v'gh'gev'qp "{ qwt go qv'kpcn'eqppgev'kqp 'v'y kf "cpko cni'cpf "{ qwt 'kpvgr tgv'kqp qh'cpko cni'go qv'kqp0Y g y greqo g'y g'uwo k'kqp'qh'pettev'xgu.'r j qvi ter j u. xkf gqu'cpf lq't'cwf kq'tgeqtf kpi u'qh { qwt 'kpvgtcev'kpu'y kj 'y kf rkhg0

Y g'ctg'j qr kpi "{ qw'o c{ 'dgpgh'htqo 'dglpi 'kp'y ku'uwf { cpf 'kp'y g'eqo o wpk' 'etgcvf 'y tqwi j qwt'r r'v'htqo 'y j lej 'y kn'hqugt'o gcpkpi hwi'eqpxgtucv'kpu cdqw'r ct vkr cpwø j wo cp/cpko cni'kpvgtcev'kpu0Vj g'tgugctej gtu'j qr g'v' i gpgtcv'npqy rgi g'cdqw'y g'tqng'qh j wo cp'w'pf gtucpf kpi 'qh'ugpvkpeg'kp'eqpugtxcv'kqp'r tcev'egu y cv'o c{ 'dgpgh'v'uekv'0

Vj g'tgeqtf u'qh'y ku'uwf { 'y kn'dg'ngr v'r tkxcv'0Kp cp{ 'uqtv'qh'tgr qt'v'y g'o c{ 'r wdrkuj . 'y g'y kn'pqv kpenf g'cp{ 'kphqto cv'kqp'y cv'y kn'o cng'k'r quukdng v'k'f gpv'kh{ "{ qw'kh{ qw'y kuj 'v'q'tgo clp cpqp{o qwa0Ki{ qw'j cxg's wgu'kpu'cdqw'y ku'tgugctej . { qw'o c{ 'eqpvcev'lgppk'ht'Uej cwt. lgppk'ht'ngm{GB deQf w.'839/774/63520

D{ 'v'r kpi "{ qwt 'hwn'pco g'kp'y ku'vz'v'dqz."{ qw'ctg ci tggkpi 'v'dg'kp'y ku'uwf {0O cng'uwg'g'qwt