

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

Authors

Cppc'Tgkm{.'Cpplg'N{pej . 'Mcvk'Tlej ctf u.'P gm'F qwi ru. cpf 'Nk{ 'Lghgt {

Gpxkqpo gpvcn'Uwf lgu'Rtqi tco . 'Dquvp'Eqmgi g.'Dquvp. O C.'24689.'WUC

Corresponding Author

Igppkgt'Tgdgeec'Uej cwt.'649'O eI wkpp.'F gr ctvo gpvqh'Uqekmqi {.'Dquvp'Eqmgi g.'Dquvp. 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'kpvkpi "cp go qvqpcn'cr r tqcej "v'ghgevkpu'qp'y kf rkg'kpvgtcevkpu. eqpugtxcvqp."cpf "dkqf kxgtuk{0

Acknowledgements

Vj g'tgugtej gtu'y qwf 'hng'v'vj cpn'Rtqhguaqt'Igppkgt Uej cwt.'vj g'Gpxkqpo gpvcn'Uwf lgu r tqi tco . 'Rtqhguaqt'Vcte'RkucpkI ctgcw.'qwt'hgmjy Ugpkqt'Tgugtej "Ugo kpc't'encuo cvgu."cpf "qwt r ctvkr cpw'hqt'vj gk'eqpvtkdvwkpu'v'qwt'uwf {0

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'y ku'eqo o wpkv'ugvki .
y g'y cpv'q'hqvtg'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 cpw'0Dwrf kpi 'qh'h'qh'Tlej ctf uqp'kf gcu.'vj g
tgugtej gtu'dgn'xg'vj cv'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 ctggu'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'vcdmg0Uj 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 "eqmgci wgu'kpenmf 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'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 "eqmgci wgu'j cxg'kpur k'gf vj ku'ugevkqp."y j k'j 'y g'j cxg'ej qugp'vq
f gf kec'v'v'vj g'r gtuqpcnr'pcttcvkgu'qh'vj g'tgugctej gtu0

Lghgt { "dgrkxgu'vj cv'f geqputwevkpi "vj g'f ggr n{/tqqvgf . j k'ctej kec'n'tgrvkpuj k' "dgwy ggp
j wo cpu'cpf "pqp/j wo cp'cpko cn'ku'guugpv'cr0Crko k'cvkpi vj gug'r tgeqpegkxgf "pqvqpu'qh'j wo cp
uwr gkqtkv' { 'cpf "rcgcpki "k'v'vj g'ugpvkpv'pcwtg'qh'cm'dgkpi u'y kn'cmqy "cm'ur gelgu'v' "eqgzku'qp
Gctvj "k'c'eqo r cuukqpcv'g'o c'ppgt'cpf "tgf weg'vj g'ugxgtg j cdkcv'f kutw vkqp'cpf "uwdugs wgpv
dkqf kxgtukv' "m'uu'y g'ewtgpv' "hceg0

F qwi r'cu'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'pf k'kf wcu'v'v'qr gpn' "go dtceg.
Tgkm' "ci tgguy' k'j "F qwi r'cu'vj cv'cwkwf gu'vqy ctf u j wo cp/cpko cn'tgrvkpu'o wu'dg'tgeqpvk' g'gf
d { "vj g'eqo o qp'r qr wcvkqp'hqt'tgcn'eqpugtxcvq'v' qeewt0Tgkm' "hggnu'vj cv'cpvj tqr qegpvtkuo "ku'uu
f ggr n' "kpi tckpgf "k'v'v'c { v'v'qekv'gu'vj cv'k'pf k'kf wcu' o c { "pggf "v'ko g'v'q'ceen'ko cv'g'v'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 qtn0 kpur ktf "d { " yj g" y qtmqh" Mktmug { "cpf " J gm tglej " *4232+ " N { pej
j qr gu" vq" dt kpi " kp" r gtur gev xgu" qh" gs wcrk { . " tgr nce kpi 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 gtcv xg vq" cf xcpeg" qwt " Y guvtp" r wdrk
wvf gtucpf kpi " qh" cpko cni' ugpv kpeg" dg { qpf " wkrkct kcp xcncv kqp" qh" ur gekgu. " cpf " vqy ctf u" cp
wvf gtucpf kpi " qh" o wkur gekgu" cu" i qpf " vq" rixg" y kj . cpf " co qpi " *Mktmug { "cpf " J gm tglej . " 4232+0

Tlej ctf u" dgrkxgu" yj cv" yj g" dkpctkgu" yj cv" gzku" vgr ctcv kpi pqpj wo cp" cpko cni' htqo " j wo cpu
ctg" j cto hwnht" cm" ur gekgu0 k" ku" kp" cm" ur gekgu dguv" kpvgt guv" yj cv" uwej " dkpctkgu" cpf " j kgtctej kgu" ctg
f kuo cpvrgf " dgecvug" cm" rixgu" j cxg" kpj gtgpv" xcncv0 Tlej ctf u" j qr gu" vq" cv" gpi ci kpi " kp" etklecni" cpf
gptlej kpi " eqpxgtucv kpu" cdqw" cpko cni' ugpv kpeg" ku cp" ko r qtcv pv" ugr " kp" dt gcnkpi " f qy p" yj gug
vtf kkpccni' dctt kgtu0

Trends in Existing Literature

Vj g" gzku kpi "dqf { " qh" t guctej " gzt rqt gu" yj g" tqrg" qh xcncv. " cvkwf gu. " cpf " f kt gev" kpvgtcev kpu
qp" yj g" tgrv kpuj kr " dgvy ggp" j wo cp" cpf " pqpj wo cp" etgcwt gu. ekk gp" o qpkqt kpi . " cpf
eqpugt xc vqp" r tcev kgu0 Vj gtg" ctg" c" xctk gv { " qh" t gpf u gur gekm { " ucrlgpv" vq" hwwt g" t guctej " qp" yj g
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ko r qtcpeg" qh" eqo r cuukap" kp" j wo cp" cvkwf gu" vqy ctf u y kf rkhg. " tgr qt v kpi " go qv kpcni' xctkcdrgu" cu
yj g" utqpi guv" r tgf levqt " 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 cni' cpf " utqpi gt " hggkpi u" cdqw" ugpv kpeg o c { " r gcf " vq" dgwt " t gcv gpv" qh" cpko cni
*Nctupq" gv" cri0 4238= Eqtpkuj " gv" cri0 423: +0 Go r cvj gve t gcv gpv" qh" cpko cni' gz vgpf u" vq

r gtur gevkg"F qnd{. '4242+0F qnd{ a'go r j cuku'qp'go r cvj { 'kp'j gt'uwf { 'cpf'j gt'wug'qh'eqmgi g
uwf gpw'cu'r ctvek cpw'ctg'vy q'yj kpi u'y gdf 'rkng vq'o kttqt'kp'qwt'uwf {0Y cmej "cpf "eqmgi wgu
cti wg'ht'yj g'ko r ngo gpvkvq'qh'eqo r cuukqpcvg'eqpugtxcvkvq. c'hto "qh'eqpugtxcvkvq'kp'y j lej "cm
ppj/j wo cp'cpko cn'uwldgeu'ctg'tgcvf "cu'ugpvkgpvdgkpi u'cpf "ctg'uggp'ht'yj gk'kptkpuk'xcnwg
*Y cmej "gv'cn0'423: +0Vj g'cwj qtu'uwf kgf "xctkqwu ecugu'qh'cpko cn'eqpugtxcvkvq'cpf "etkks wg'yj g
y c{u'yj g{'ki pqtg'cpko cn'ugpvkpep'cpf "cev'y kj "cp cpvj tqr qegpvt'ugv'qh'i qcm' *Y cmej "gv'cn0
423: +0Y j kg'y g'y kn'pqv'dg'cpcn{ | kpi "ewttgpv'eqpugtxcvkvq ghqtw. 'y g'y kn'dg'kpxgvki cvkpi "yj g
tgrvkvpuj k' dgwy ggp'xkgy u'qp'ppj/j wo cp'cpko cn'ugpvkpep cu'kvtgrvgu'vq'cwkwf gu'vy ctf u
eqpugtxcvkvq00 cphgf q'cpf "eqmgi wgu. 'yj tqwi j 'yj gk' cpcn{ ulu'qh'uqekqewwtcn'xcnwg'qp'y kf rkhg
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*4242+0Vj ku'uwf { "cuuguu'yj g'ko r cev'qh'xcnwg'u'vy ctf u ppj/j wo cp'cpko cu'qp'y kf rkhg
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ko r cev'r gtegr vqpu'qh'y kf rkhg'eqpugtxcvkvq'yj tqwi j uvtkgu. 'r j qvu. "cpf "qvj gt'uwej "o gf kwo u0k
qwt'f cv'eqmgevkvq'r gkqf 'y g'cko "v'hqvgt'c'y cto cpf "ceegr vki "gpvkvqo gpv'ht'yj g
r ctvek cpw'kp'qwt'f kuewukq'p'i tqwr 'y j gtg'yj g{ 'y kndg'kpxkgf "v'twn{ "gzr mgt'yj gk' yj qwi j u'cpf
hgkpi u'cdqw'cpko cn'ugpvkpep0Uko krcn{ 'v'F qnd{. y g'y kn'gpeqwtci g'r ctvek cpw'vq'r ww
yj go ugrkgu'kp'yj g'qvj gt'dgkpi a'r rneg'cpf "t{ "v'kvgr tgv'cpf "tgegkg'yj gk' "gpgti { "cpf "go qvkvu0
Y g'y kn'r tqo r v'yj g'uwf { 'r ctvek cpw'vq'yj qwi j vwm{ tghge'vr qp'yj gk' "kvgtcekvkvq'yj kj
ppj wo cp'y kf rkhg'cpko cu0Y g'y cpv'vq'ecm'cwgpvkvq vq'yj g'vpls wg'gpgti gke'dqpf 'yj cv'ku'uj ctgf
dgwy ggp'vy q'ugpvkpv'dgkpi u0Y g'y kn'gpeqwtci g'qwt r ctvek cpw'vq'dtkpi "cp'gxgt'r tgu'gpv
cy ctgpguu'qh'eqpuekvq'wpguu'yj cv'cm'rkxkpi "etgcwtgu r quuguu0Y g'j qr g'yj cv'yj ku'j gli j vpgf
cy ctgpguu'ecp'rgcf "v'o qtg'o gcpkpi hwn'f kuewukq. tghgekvq. "cpf "eqpvkvqgf "o wvcm{ "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 ceu'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'tqng'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 qvgp'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 m 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 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 m
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 l h x 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 x 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 m 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

Rct vkr cpw'y gtg'kpxkgf "xlc"vgzv."go ckn'y qtf/qh'o qwj . cpf "uqekri'o gf kc"vq'r quv'y gk
y kf rkhg'kpgtcevkpu"v'y'j g'Hcegdqqmi tqwr 0Rct vkr cpw y gtg'cungf "v'uj ctg'pcttcvxgu."r j qvqu.
xkf gqu."qt"cwf kq'hkgu"cpf "r tqo r vgf "v'tghgeev"qp vj g"go qvkpcn'gZR gtkepegu"qh'y gk'y kf rkhg
kpgtcevkpu0C"eqo o qp"dcttkgt "hqt"ekkl gp"uekpeg tgugctej "ku"uwuckpgf "gpi ci go gpv'cpf
eqo o ko gpv'qh'r ctvkr cpw"Rrgeq'gv'crl04243+0Y g'cko "v'cf f tguu'y ku'ej cmgpi g'd{ "qhgtkpi
o wnr ng'r tqlgev'gpt { "r qkpw"cu'y gm'cu"o wnr ng y c{ u"v"r ctvkr cvg"cvf khtg gpv'hxgnu"qh
eqo o ko gpv'lp'y g'Hcegdqqmi tqwr "Rrgeq'gv'crl04243+0Gzco r ngu"qh'r ctvkr cvkqp"dg{ qpf
r qukpi "kpenf g'kpgtcevkpi "y kj "qy gt'r quu'y tqwi j rkgu"cpf "eqo o gpw."y vzej kpi "rkxg'utgco
xkf gqu'j quvgf "d{ "y g'tgugctej gtu."cpf "tghgtkpi "qy gt r ctvkr cpw"v'y'j g'i tqwr 0F cv"eqmgcvkqp
dgi cp"qp"Qevqdg"36."4242"cpf "eqpenf gf "qp"Cr tkl36. 42430

Data Analysis

Cp"guugpvkenr ctv'qh'qwt"f cvc"cpcn{ uku"o gj qf "ku"eq/etgcvkp. y j lej "cmqy u'qwt"uwf { "vq
dvwf "c"tkej "pcttcvxg"dgwy ggp'y g'r ctvkr cpw"cpf vj g'tgugctej gtu"D3/kluj /Dtgf plej ."423: +0
D3/kluj /Dtgf plej "go r j cuk gu'y cv'wpeqpxgpvqpcn'o gj qf u qh'pcttcvxg"gy pqi tcr j { "ctg'k
vpuvkp'y kj "y g'pggf "hqt"gy pqi tcr j le'tgugctej "v dg"cmgp"ugtkwun{ "cu"uqekri'uekpeg
*D3/kluj /Dtgf plej ."r 0; ."423: +0Y j kg" { gv"u"pcttcvxg dguv'ecr wtgu'y g"go qvkpu"gZR tguugf "d{
r ctvkr cpw'tgi ctf kpi "y gk'y kf rkhg'kpgtcevkpu. cpf "ku"o quv'twg"v'y'j g'pcwtg"qh'ugpvkpeg0
Hwtj gto qtg."qwt"o gj qf u'hqmny "cp"kpwxkxg"cpcn{ uku cr r tqcej "cu"qr r qugf "v"cpcn{ vkenleqf kpi
qh'y g'f cvc0D3/kluj /Dtgf plej "chko u'y cv'y j kg"okv ku'vgo r vki "v"vwp'uvqtkgu'kpv"f cvc"cpf
f gxcnw"y g'cev'qh'f ggr "kuvpkpi "cpf "pcttcvxg"eqpvgo r rvkqp.ö vj g'r tqegu"qh'qtf gkpi "uvqtkgu
kpv'pcttcvxgu"ku'dguv'i wkf gf "d{ "c"s wcrkcvkxg"cr r tqcej vj cv'f qgu'pqv'mug'y'j g"go qvkpu'k'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 wrkcvkxg s wgunkqpu'vj cv'eqpukf gt'vj g'go qvkpu
cpf "ugpvkpeg"dgj kpf "vj g'uwo kwgf 'r j qvqi tcr j u.'xkf gqu. cpf "cwf kq'tgeqtf kpi u0S wgunkqpu'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 qukkqp'qh'vj g'r j qvqi tcr j uc{ "cdqw'vj g'tgrvkqpuj kr "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'tgrvfg cempqy ngf i go gpv'qh'pqp/j wo cp'cpko cnl'go qvqp'y kj kp vj g'f'guetkdgf 'kpvgtcevqp0Hqwtvggp.'qt 85085' . 'qh'vj g'r ctvkr cpw'eqo o gpvfg 'qp'vj g'r gtekgxf go qvqpu'qh'vj g'cpko cnl'qt'cpko cni'vj g{ gpeqwpvgtgf 0Vj g'uwwf { 'y cu'cm quv'gpvkn' 'eqo r qugf qh'hgo cmg'j wo cp'r ctvkr cpw'y j kej 'o c{ eqttgrv'q'vj g'o clqtk' 'qh'r ctvkr cpw'o cnl'pi 'ugpvkpeg/tgrvfg eqo o gpw0Eqtpkuj 'cpf eqmgi wgu'hqwpf 'vj cv'hgo cmg'y gtg'o qtg'rkng' 'q' gpi ci g'go qvqpcn' 'y kj 'pqp/j wo cp'cpko cni *Eqtpkuj 'gv'cn'423: +0J qy gxgt.'pq'r ctvkr cpw'gzr rkn' wugf 'vj g'y qtf 'ugpvkpeg'kp'vj gkt pcttcvkg0Vj gtghqtg.'eqo o gpw'qp'cpf 'tgrvfg 'q'r gtekgxf go qvqp'cpf 'ur kkwcnl'pvtur gelgu eqppgevqp'y gtg'eqpukf gtgf 'wvf gt'vj g'vj go g'qh'ugpvkpeg0

Trend 2: Key words about human emotional experience

Vj tgg'qh'vj g'44'r ctvkr cpw'*35085' +y j q'ngw'pcttcvkg r quw'tgr qtvgf 'hggkpi 'go r cvj { hqt'cpqt#

j wo cp'lpvgtcevkqpu'y kj 'y kf rkhg'cpko cnu'cpf 'yj gk'j cdkcwoVj gtg'y gtg'ugxgtenr ctvlekr cpwu'y j q
kpf kecvgf 'yj cv'y g{ 'hgn'cr r tgj gpukxg'qt'hgcthwi'cdqww yj gk'lpvgtcevkqpu'y kj 'y kf 'cpko cnu'Vj tgg
r ctvlekr cpwu'qh'y g'44'vqcnl'kpf kecvgf 'yj cv'y g{ 'hgn'pgtxqwu'qt'hgcthwi'ctqwpf 'cpko cnu'dw'y q'qh
yj g'y tgg'tgr qtvgf 'wko cvgn' 'j cxkpi 'r qukkxg'hgnkpi u cdqw'yj g'lpvgtcevkqpu0

Trend 3: Transformative effect of experience

Dgecwug'r tgxkqwu'uwf 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'cpuhtqto cvkxg'pcwtg'qh'yj g'r ctvlekr cpwu) gZR gtlgpegu'*Nctuq'g'v'cn0'4238=
F qrd{ . '4242='Ueqw'g'v'cn0'4242-0'Qh'yj g'44'f guetk vkg pcttcvkgu. ': 'r ctvlekr cpwu*5808' +
gZR rlekn{ 'f guetkdgf 'c'v'cpuhtqto cvkxg'ghgevtqo yj gk'gZR gtlgpeg'y kj 'y kf rkhg.'9'r ctvlekr cpwu
*530: ' +lpenmf gf 'pq'tghgtgpeg'v'c'v'cpuhtqto cvkxg'ghgevtqo'v'gk'gZR gtlgpeg.'cpf 'yj g'tgo clkpi
9'r ctvlekr cpwu*530: ' +lpenmf gf 'ko r rlekn'tghgtgpegu v'v'g'gZR gtlgpegu'eqpvtkdwkq'v'v'gk'pgy
r gtur gevkg0Ukz'qh'yj g'gki j v'v'cpuhtqto 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'v'v'ku'tgugctej 'y cu
eqpf wevgf 'lp'yj g'o kf uv'qh'yj g'EQXKF/3; 'r cpf go le.'vy q qh'yj g'gZR rlekn{ 'v'cpuhtqto cvkxg
gZR gtlgpegu'lpenmf g'tghgtgpegu'v'v'g'ko r qtvcpeg'qh'eqppgevkq'p'y kj 'qyj gt'ur gekgu'f wtkpi 'yj ku
r gtlqf 'qh'kuqrcvkq0'Hkxg'qh'yj g'gki j v'v'cpuhtqto cvkxg'gZR gtlgpegu'lpenmf gf 'gZR rlekn'tghgtgpegu'v'v'
r gtuqpcn'cevkq'v'v'qy ctf 'eqpugtxcvkq0Qpg'v'cpuhtqto cvkxg'gZR gtlgpeg'j gir gf 'c'r ctvlekr cpv'hgn
r gtuqpcn{ 'eqppgevgf 'v'v'kf rkhg0'Vj gtg'y cu'cp'qxgty j gm kpi v'v'gpf 'lp'r ctvlekr cpwu'gZR gtlgpegu
ecwulpi 'tghgevkq'qp'o wkur gekgu'eqgzkvgepeg0'Qh'yj g'eqo dkgf '37'gZR rlekn{ 'cpf 'ko r rlekn{
v'cpuhtqto cvkxg'gZR gtlgpegu. '; 'lpenmf gf 'c'tghgevkq qp'eqgzkvgepeg'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 gtlkpegu
uj qy gf 'hgy 'eqo o qpcrkkgu0"Vj g'ur gekgu'gpeqwpvgtgf cpf 'mcecvkqu'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 gtgā'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
ugcnu'cdkrk' { 'v'eqgzkv'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'ugcnu'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 gtlkpegu'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'hqmy 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.'ugcnu.'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 tqgev'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'eqgzkv'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 tqg
cdqw'vj gk'kpgtcevqpu'y kj 'j wo r dceny 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 vkv'.'cpf

f guetkdgf 'hggkpi '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 ctvlek 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'hqewugf 'qp'eqgzkvgep.'cml'qwt
*322' +y gtg'eqppgevgf 'v'kpvgtcevkqpu'y kj 'tctg'cpko cnu0Kp'qpg'r quv'cdqw'o qwpvckp
i qcu.'yj g'r ctvlek 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'Kp'cpqyj gt'r quv.'c'r ctvlek 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 ctvlek 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 quw'vj cv'tghngevgf "qp'vj gug'vqr keu'cu'y gmi'cu
eqgzlvgepeg."; 'r quw'8604: ' +y gtg'htqo 'kpgtcevqpu y kj 'tctg'cpko cnu0

Trend 5: Composition of Photograph

J qy 'f'kf 'r tqzko kv 'chgevj qy 'vj g{'hgn'cdqww'vj g'cpko cnaF kf 'k'gxqmg'tgur gev'hgctA

c0 Y qqf r gengt<õJ g'f'kf pø'uggo "vq'o kpf "o g'ucpf 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 'qhh'j ku

r qy gt/r genkpi "cdkklgu0Khn'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

cemcãrã cbpã cãrdã
d0 Gm'õkj gãmã uqpuuv'f kgev'g zr gfej 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'f tkngf 'y j kg'dgkpi 'uwtqwpf gf 'd{ 'J wo r dcemu hqt 'yj tgg'j qwtuö
- g0 UgcndöCv'j ku'eqxg'qp'vj g'y cvgt.'o cp{ 'ugcni'i cvj gtgf ctqwpf 'v'uwpcvj g0Kuy co 'kp'vj g
 y cvgt'cpf 'y cu'j qpguwl 'uwr tkugf 'd{ 'yj g'ugcnu'æremqh'j quv'kv' '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'uwpcvj kpi . 'uy ko o kpi .
 erko dlpi 'qp'vj g'tqemu.'gplq{ kpi 'yj g'uwpcvj . 'gveí "Ky cu ucpf kpi 'uwr gt'emug'v'v' q'ugcnu
 y j q'uggo gf 'v'i gv'kp'cp'cti wo gpv'y kj 'gcej 'qvj gt' 'g'vf 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 v'k' 'cpf 'k'y cupø'drkpnkpi lkw
 g{ g'y cupø'o qxlpi 0Kdgi cp'v'i gv'y qttkgf 'cpf 'eqpukf gt vj g'r quukdkv' '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'utt { 'hqt 'k0Ky qwr 'pqv'eqpukf gt
 o { ugrh'cp'cpko cni'qxtg'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 g'hpugruu'ku'y j cv'o cf g'o g'pqv
 hgn'vj tgcvgpgf 'd{ 'k'dw'tcvj gt'vj kpnkpi 'qh'y c{ u v'v' 'v'j' gr 'k0
- i 0 F ggt <ðK'rqmgf 'qwukf g'vj g'y kpf qy 'qh'o { 'j qwug'cpf ucy 'c'f ggt'uctkpi 'cv'o g'cpf
 uqo r kpi 0K'y cu'c'tgcm' 'co c| kpi 'gZR gtlgpeg'v'ugg vj g'f ggt'tgeqi pk g'cpf 'kvgtcev'y kj
 o g0
- j 0 Dkuqp<ðQp'o { 'y c{ 'yj gtg.'Kuvr 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'vj gk r t'gugpeg0Vj g{ 'f kf pø'uggo 'v'
 pqv'eg'o g'cpf 'y gpv'cdqvw'vj gk'f c{ 'i tcl kpi 'cpf 'y cm'kpi ctqwpf 0

10 I qcvu<ōKi qv'c'dk'pghtxqwu'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 ng'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 ngf 'qp'c'dgpej 'tgukpi 0K
ucv'qp'vj g'dgpej 'qr r qukg.'cdqw'8'hggv'cy c{0K'iqqngf wr . 'kf gp'kkgf 'o g'cu'c'pqp/vj tgcv
cpf 'y gpv'dcem'v'unggr 0K'eqwf pō'j grr 'dw'pqv'eg c'r gtuqperkv{ 'v'j ko . 'hng'j qy '{ qw'hgn
y j gp'{ qw'g'pcr r kpi 'qp'vj g'eqwej 'cpf 'uqo gqpg'y cmu k'p'uq'{ qw'iqqm'wr 'dghqtg'i two r kq
i q'dcem'v'upqq| kpi 0

67067' 'qh'r quu'tghgtgpegf 'j wo cp'r tqzko kv{ 'v'y kf nkg ur geku0Ugxgtcn'qh'vj gug'r quu

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
 kvgtcevqp0vj 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
 kvgtpcvqpcn'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'cni'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 { 'gztg'kpeg'cpko cn
 ugvkpeg'y kj qw'j cxkpi 'rgctpgf 'cdqw'vj g'hqto cneqpegr 0F qnd { 'cti wgu'hqt'vj g'gzt cpukp'qh
 gpv'kqpo gpv'nf'gf wecvqp'ur gekk'ecm { 'tgrcvf 'vq'go r cvj { cpf 'cpko cni'ugpvkpeg'y j lej 'y g'cniq
 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'eqngevgf 'uj qy u'vj cv'j wo cpu'gztg'kpeg'c dtqcf 'tcpi g'qh'go qvqpu'y j gp
 kvgtcevpi 'y kj 'vj g'rkv'gu'cpf 'ugpvkpv'ur kksu'qhy kf rkhg'cpko cni'0Y j gp'r ctvkr cpw'tgr qtvgf
 hgnrpi u'qh'go r cvj { 'hqt'pqp/j wo cp'cpko cni'vj g { 'hgnv'ytg'utwi i rpi 'kp'uqo g'y c { . 'vj g {
 o gpv'kqpgf '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 'tghngeu'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 "etk'k'ecm' "cpf
g'y k'ecm' "cdqw'eqpugtxcvkqp0K'vgt'gukpi n' . 'y g'eqo r cuukqp ug'xgt'cn'qh'vj g'r ct'v'ekr cp'u'h'gn
k'pxqmgf 'c'ugpug'qh'f w'f 'v'q'eqpugt'xg'vj g'rk'xgu'cpf y gm'dgkpi "qh'y k'f r'k'g'cpko cu'0Vj g'o clqtk'f "qh
r ct'v'ekr cp'u'g'zr t'guugf 'r qukk'x'g'h'gnkpi u'k'p'vj g'k' p'ctt'c'v'x'gu't'geq'w'v'kpi 'y g'k'g'zr g't'k'g'pegu'y k'j
y k'f r'k'g'cpko cu'0Vj ku't'g'p'f 'ku'g'zek'kpi "dw'p'qv'p'gegu'ct'k'f u'w'r t'k'k'pi 0O q't'g'q'x'g't.'u'we'j 'h'k'p'f k'pi u
c'h'k'to 'y c'v'ek'k' g'p'v'ek'g'peg'i t'q'w' u'r t'q'x'k'f g'go q'v'x'g' g'zr g't'k'g'pegu'y t'q'w' j 'g'f w'ec'v'kpi 'r ct'v'ekr cp'u'q'p
ko r q't'c'v'p'g'p'x'k'q'po g'p'w'c'n'v'q'r k'eu'*R'c'g'eq'g'v'c'f'0'4243+0

Trends in Transformative Narratives

Vj g't'gu'w'u'h'q'w'p'f 'k'p'vj ku'uw'f { 'ct'g'eq'p'uk'v'g'p'v'y k'j r t'g'x'k'q'w'u'uw'f { a'k'p'f k'pi u'vj cv
g'zr g't'k'g'pegu'y k'j 'y k'f r'k'g'j' c'x'g'vj g'c'd'k'k'f 'v'q'o q'v'x'c'v'g' j wo cp'c'ev'q'tu'v'q'y c't'f "go r c'v'j g'v'k'e'c'ev'k'q'pu
v'q'y c't'f 'y k'f r'k'g'c'p'f "c'h'g'ev'x'g'c'p'f "go q'v'k'p'c'n't'g'ur q'p'ugu v'q'y k'f r'k'g'u'v'ko w'k'*N'c'tu'q'p'g'v'c'f'0'4238=
F'q'nd'f . "42420N'c'tu'q'p'c'p'f "eq'm'g'c'i w'gu'h'q'w'p'f 'y c'v'g'zr g't'k'g'pegu'y k'j 'j' q'w'ug'ur c't't'q'y u'r qukk'x'g'n'f
c'h'g'ev'g'f 'r ct'v'ekr cp'u'v't'g'c'w' g'p'v'q'h'vj g'ur g'el'gu.'y j lej ku'uw'r r q't'v'g'f 'd' { 'y g'q'x'g't'y j g'm' k'pi 'r q't'v'k'p
q'h'g'zr g't'k'g'pegu'y c'v'q'w't'uw'f { 'h'q'w'p'f 'v'q'd'g'r ct'v'ek'w'c't'n'f v't'c'p'uh'q'to c'v'x'g'0'F'q'nd'f { 'h'q'w'p'f 'y c'v'y t'k'k'pi
cp'g'u'uc' { 'h't'q'o 'y g'r g't'ur g'ev'x'g'q'h'c'p'c'p'ko c'n'vj g' { 'j' c'f r t'g'x'k'q'w'u'f "q'd'ug't'x'g'f "eq'p't'k'd'w'g'f
u'k'i p'k'h'ec'p'v'f 'v'q'vj g'k'g'p'x'k'q'po g'p'w'c'n'g'f w'ec'v'k'q'p'c'p'f go r c'v'j g'v'k'e'eq'p'p'g'ev'k'q'p'v'q'c'p'ko c'u'F'q'nd'f .
4242+0Q'w't'uw'f { "eq'p't'k'd'w'gu'v'q'F'q'nd'f { a'v'y q't'm'f' { 'u'j' q'y e'c'uk'pi v'j g'r q'y g't'q'h'g'zr g't'k'g'p'v'c'n't'g'h'ng'ev'k'q'p
q'p'j' wo c'p'a'eq'p'eg'r v'k'q'pu'q'h'c'p'f "eq'p'p'g'ev'k'q'pu'y k'j "q'v'j g't'ur g'el'gu'0H'k'g'g'p'q'h'vj g'44'*8: Ø: ' +
r ct'v'ekr cp'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't'c'p'uh'q'to c'v'x'g'p'c'w'w'g'q'h'vj g'k't'y k'f r'k'g'
k'p'v'g't'cevk'q'p.'u'w'i i g'uk'pi 'y c'v'k'p'et'g'c'ug'f 'h't'g's'w'g'p'e' { "q'h'j wo c'p/y k'f r'k'g'k'p'v'g't'cevk'q'pu'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' g'p'v'q'h'q'v'j g't'ur g'el'gu'0"R'ct'v'ekr c'p'v'38a'v'c'v'g'o g'p'v'ec'r w't'g'f 'y g'ug'p'v'ko g'p'v'q'h
o c'p' { "q'h'vj g'i t'q'w' a'v'o go d'g't'u'c'v'0Vj g' { 'y g't'g'x'g't' { 'ec'm' c'p'f "ug'go g'f "s'w'k'g'eq'p'v'g'p'v'l'w'v'j' c'p'i k'pi "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'pcwtcny qtrf . 'qhv'p'ngcf kpi 'vq'ugr ctcvkap'qh
ur gelgu0'Y j gp'j qo q'ucr kgpu'ctg'gpeqwtci gf 'vq'lpvgtcevy kj 'qvj gt'ur gelgu'lp'vj gkt'v' r'lecn
gpv'vj g' ctg'cdng'vq'f geqpuv'wv'vj g'f qo kpcpvp'cwtg/uqekv' 'kf gqni' kcn'f kxkf g0
Cempqy rgi 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 'gpv'ku'c'etwecnuvgr 'vqy ctf u'l'wuv'r t'gugt'xcv'kp' *Mktmug{
cpf 'J gm tglej . '4232+0' Cp'qxgty j gm kpi 'o clqtkv' 'qh'vj g'gZR nek'v' 't'cpuhqto cv'xg'gZR gtlgpegu
qeewt'gf 'dgy ggp'j qo q'ucr kgp'cpf 'c'ur gelgu'vj g' lpvgtcevy kj 'tctgn'0'Vj ku'o c{ 'uwi i guv'vj cv
ur gelgu'lpvgtcevy'ctg'o qtg'r qy gthw'vj j gp'vj g' 'eqv'cuv'v' r'lecn'lpvgtcevy'cu'0'Hqt'gzco r'ng.
Rctv'ekr cpv'4'y tqv'cdqww'vj gkt'gZR gtlgpeg'y kj 'j wo r' dcemy j crgu'0'Vj g'f c{ 'y cu'qpg'Ky km
hqtgxgt'tgo go dgt'y kj 'vj g'tcpuegpf gpv'uqwpf u'qh'y j crgu dtgcej kpi 'pgctd{ 'cpf 'vj g'tgcrk' 'qh
y j cv'y g'xg'f qpg'vq'vj gug'y cvgtu'ukn'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 qtn'icpf 'eqv'kdw'k'vq'v'eqpugt'xcv'kp' kpk'cv'xgu'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'p'v'cn'vq' dg'o qtg't'cpuhqto cv'xg'0'Rctv'ekr cpv'33
eqppgevgf 'y kj 'c'f'gg'0'K' dtqwi j v'o g'emugt'vq'y kf'rhg' cpf 'K'hn'o qtg'eqppgevgf 0K'v'ugcf 'qh'l'wuv
qdu'gt'x'kpi 'vj ku'cpko cnu'qo 'vj g'lp'v'kf'g.'Ky cu'cewcm{ o cnu'kpi 'g'g'eqp'cev'cpf 'dgkpi
cempqy rgi i gf 'd{ 'vj ku'f'gg'0'J wo cpu'o c{ 'dg'o qtg'eqppgevgf' cpf 'o q'v'x'cv'gf 'vq'r' tqv'ev'ur gelgu
vj cv'gzj kdk'j wo cp'rhg'hcw'wt'gu'0'Vj g't'gu'w'u'uj qy 'vj cv'vj gug'lpvgtcevy'cu'ctg'lo r'qt'v'p'v'ht
k'p'v'qf wv'kpi 'o wnkur gelgu'eqppgevgf'cpf 'ug'p'v'k'peg'0 Vj ku'uwf { 'y cu'ur gel'k'ecm{ 'lpv'gt'g'v'gf 'lp'vj g
gh'gev'qh'vj gug'lpvgtcevy'cu'qp'r'gtur ge'v'x'gu'qh'eqpugt'xcv'kp'=j qy g'xgt. 'qpn' { 'hxg'gZR gtlgpegu'j cf 'c
f'kt'gev' 'r'qu'k'x'g'lo r'cev'qp'vj g'r'ctv'ekr cpv'v'eqpugt'xcv'kp' kpk'cv'xgu'0'Vj gug't'gu'w'u'uw' i guv'vj cv
vj gtg'ku'c'ecw'ucn'gh'gev'qh'y kf'rhg'lpvgtcevy'cu'qp'j wo cpai'r'gtur ge'v'x'gu'qp.'go q'v'k'p'u'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'kuewugu'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: . 'dqyj '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 tqwr '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'eqppgevku'y kj 'gcej 'qyj gt'cpf 'yj g
tgugtej gtu'k'pugcf 'qh'dgkpi 'dnkf 'v'y j q'yj g'qyj gt r ctvkr cpw'y gtg0Vj ku'wps wg'qprkg
r r'v'hto 'r tqxkf gu'c'pgy 'eqv'kdwkp'v'eqo o wpkf dwkf kpi 'kp'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
eqmgevku'r tqegu'v'k'p'hto 'yj g'o go dgtu'qh'yj g'i tqwr 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'wukp
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 'qyj gt'yj tqw j 'yj g'eqv'kdwkp'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'qdugtxcv'kpcncpf 't'gkgtcvxg'tqrg'ku'y j cv'o cngu
pcttcvxg'tgugtej 'cpf 'gy pqi tcr j { 'wps wg'cu'p'qygf d { 'D%pkuj /Dt'gf'plej '*423: +0Y j cv'ugw'qwt
uwf { 'cr ctv'ku'yj g'eqv'kdwkp'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'rti 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 necv'k'p'v'ht'yj g'tgugtej gtu. 'r ctvkr cpw. cpf 'rti gt'h'gn' 'qh'y kf rkg'tgugtej 0

Limitations

Y j kg'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 gpgtcnk cdrag'eqpenwukpu0' Cnj qwi j gzvpukg'ghqtu'y gtg'vcngp'v'kpxkg'kpvgtguvf r ctvlekr cpw'v'vj g'i tqwr . 'vj g'ukl 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 'gzr gtlgpegu'y kj vj g'i tqwr 0'Vj g'uo cm'uk g'qh'r ctvlekr cpw'cmqy gf hqt'o qtg'gzvpukg'cpf 'kpenwukg'cpcn { uku'qh pcttcvkgu= j qy gxgt. 'vj g'uco r ng'bo c { 'pqv'dg'tgr tguvpvkg qh'vj g'i tgcvt' j wo cp'r qr wvckp0 Cffklqpcn { . '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'eqmgi g'uwf gpw0Uq. 'vj g'hpf kpi u'o c { 'dg'r tko ctkn { i gpgtcnk cdrag'v'v' hgo crg'eqmgi g'uwf gpw0Kp'õkpenwukgpguu cpf 'F kxgtuk { 'k'Ekk gp'Uelgpeg.ö Rcrgeq'cpf 'eqmgi wgu'utguu'vj g'tqrg'qh'ekkk gp'uelgpeg k'r tqf wvki 'hpqy rfi g. 'y j kej 'y g. 'cu tgugetej gtu. 'etgcvg'vj tqwi j 'qwt'htco kpi 'qh'qwt'pcttcvkgu cpf 'vj g'r ctvlekr cpw'y g'kpenw' g'Rcrgeq gv'cn0'4243+0Kp'vj g'r tqeguu'qh'qwt'tgugctej . 'qwt i tqwr 'j cu'go dtcegf 'uwlgevkxg'gzr gtlgpeg= j qy gxgt. 'k'ku'ko r qtvcpv'v'tgeqi pk g'vj cv'qwt'kf gpv { cu'hgo crg'eqmgi g'uwf gpw'eqv'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 khhgtgpegu'kp eqpvgpv.'hko kipi 'vj g'tgugctej gt'æl'ecr cek { 'hqt'f kgeveqo r ctkuqp'qh'r ctvlekr cpv'gzr gtlgpegu0

Implications

Vj tqwi j qw'qwt'uwf { . 'qwt'kpvvpkqp'y cu'v'v'hqewu'qp eqppgevki 'r gqr ng'ctqwpf 'vj g'kf gc'qh r tqgevki 'qwt'uj ctgf 'gpxkqpo gp'0Y g'clo gf 'v'kpukmcp'go qv'kpcn'cr r tqcej 'v'tghngevkpu'qp y kf rkg'kpvgtcev'kpu. 'cpf 'd { 'uq'f qkpi . 'uj gf 'hki j vqp'vj g'tgrv'kpuj kr 'dgy ggp'r ctvlekr cpwø wpf gtuwcpf kpi 'qh'pqp/j wo cp'cpko cn'ugpv'gpeg'cpf 'vj gk qr kpkpu'qp'eqpugt'xcv'kpu'cpf dkqf kxgtuk { 0Dcugf 'qp'qwt'tguwuu. 'kp'y j kej 'r ctvlekr cpw' tgcfn { 'uj ctgf 'c'y kf g'xctkgv { 'qh vj qwi j vhw'pcttcvkgu'cdqw'vj gk 'gzr gtlgpegu'y kj y kf rkg'vj cv'go dtcegf 'vj gk'go qv'kpu'cpf

eqo o wplv{ 'eqwf 'uwf { 'y j cv'y g'o quv'ghgevxg'y c{ u'ctg'vq'lpetgcug'cpf 'o clpvk'gpi ci go gpv
 co qpi 'r ctvkr cpw'y kj 'y gug'vqr leu0Hwwt g'tgugctej gtu eqwf "gzt rqtg'kh'uj ct'kpi 'ctvkr gu.
 Htgs wgpw{ 'eqo o gpvki 'cpf 'h'kpi 'r quu.'r tqxkf kpi pgy 'r tqo r w'qt "qy gt"eqpvgpv'tgi wctn{.'wukpi
 ðNkxgö'hgcwt gu'qt "qy gt 'hcegu'qh'y gug'uqekn'pgy qtnkpi r rlvqto u'y qwf "dg'y g'o quv'uweeguuhwn
 utcvgi kgu'vq'uwuxk'c"npi /vgo "cpf 'ki j vmpk'eqo o wplv{ ctqwpf 'y gug'kf gcu0

References

D³/pkæj /Dtgf plej . 'Dtki kwg0\$Y tkkpi 'y g'Gy pqi tcr j le Uqt { <Eqputwvki 'P cttcvxg'qw'qh
 P cttcvxgu\$Hcdwrc."xqr07; . 'pq03/4."423: . 'r r 0: /480
 j wr u<lf qkQti B20737 hcdwrc/423: /2224

Dqtf c. "QH0*4228+0Rctvkr cvqt { 'Cvkap'Tgugctej kp"Uqekn'Vj gqt { <Qtki kpu'cpf 'Ej cmgpi gu0Kp
 vj g *Handbook of Action Research*0J 0Dtcf dw { *Gf 00R049/590

Eqpvtgcu."Tcpf qn0*423; +0Vj g'Dtqngp'Gy pqi tcr j { <Nguuqpu'htqo 'cp'cm quv'J gtq0*Qualitative
 Sociology*. 42*4+."383/39; 0

Eqtpkij . 'C0'Y knqp. 'D0'Tcwdgpj glo gt. 'F 0'(' 'O eI tggx{. R0*423: +0F go qi tcr j leu'Tgi ctf kpi
 Dgrgh'lp'P qp/J wo cp'Cplo cn'Ugpkpeg'cpf 'Go qvqpcnGo r cvj { 'y kj 'Cplo cn'c'Rkqv
 Uwf { "co qpi 'Cwgpf ggu'qh'cp'Cplo cn'Y grhctg'U{o r qukwo 0*Animals*, 8.'0f qk<
 3205; 2 kpk 322396

F kcl . 'Ucpf tc00WP 'Tgr qt v<'P cwtg'u'F cpi gtqwu'F gerkpq)Wpr tgeg f gpv f)=Ur gelgu'Gz vkevqp
 Tcvgu')Ceegrtcvkpi)'ó'Wpkgf 'P cvkpu'Uwuxkpcdrf F gxgr o gpv0'Wpkgf 'P cvkpu.'Wpkgf
 P cvkpu.'8'O c { '423; .
 y y y 0wp0ti luwuxkpcdrf gxgr o gpvdrqi 423; 127 lpcwt g/f gerkpq/wpr tgeg f gpv f /tgr qt v10

F ko gt.'OC.'Kppctknk'H'Vtk'CP.'I ctuj grk.'FN. Ectvt.'PJ 0Ct v'hekn'pki j v'ki j v'j gr u'ceeqp v
 hqt'qdugt xgt "dku'lp"ekk gp'uekpeg"o qpkqt kpi "qh'cp"gzr cpf kpi "hcti g"o co o cnl'qr wrcvqp0
 I0Cplo 0Geqr04242=22<3ó'350j wr u<lf qkQti B20333 B587/48780555:

F qnd { 'P 0*4242+0P qpj wo cp'cpko cni'cpf 'y g'hwwtg'qh'gpxktqpo gpvni'gf wecvkp<'Go r cvj { 'cpf
pgy 'r quidkrlkgu0Journal of Environmental Education. 50*668+:'62566370
[j wr u<l f qkQti B2B2: 2122; 7: ; 860423; B8: 9633](#)

Lcpg'I qqf cni'kpuvkwg'P gy '\ gcrpf 0\$Cplo cni'Ugpkpeg\$. F ge'3; . '423; .
[j wr u<l y y 0 qwwdg0eqo ly cvej Ax? qOm I uP 9IZK hgcwtg? go da vkr0](#)

Mktmg { 'U0('J gm tglej . 'U0*4232+0Vj g'Go gti gpeg qh'O wnkur geku'Gvj pqi tcr j {0E wmwtn
Cpj tqr qmji { . '47*6+:'767/7980

Nctup. 'Nkpeqp' T0Ectgp' D0Eqqr gt('O ctni'G0J cwdgt *4238+'Go qvqpu'cu'F tkxgtu'qh'Y krf rkhg
Ugy ctf uj kr 'Dgj cxlqt<'Gzco klpki 'Ekkk gp' Uelgpeg'P guv O qpkqtu0T gur qpugu'vq' kpxcukxg
J qwug'Ur cttqy u.'J wo cp'F ko gpukqpu'qh'Y krf rkhg. '43-3. 3: /55. 'F QK

O cplhtgf q. 'O 00'Vgnn' VN0'F qp'Ectnqu. 'C0Y 0'Uwnkxcp. N0'Dtki j v' C0F 0'F kgvej . 'C00 0
Dtwnmqwt. 'L0'cpf 'Hwnqp. 'F 0*4242+'Vj g'ej cpi kpi uqekqewmwtn'eqpvzv'qh'y krf rkhg
eqpugtxcvqp0Eqpugtxcvqp'Dkqmi {0f qk320333 lqdk0356; 5

Rcrgeq. 'E0'Rgvt. 'U0I 0'Ugqcp. 'P 0'U'Mcwhc cpp. L0('Cti {tk' R0*4243+0'kpenwukxgpguu'cpf
F kxgtukx' k' Ekkk gp' Uelgpeg'0Vj g' Uelgpeg'qh'Ekkk gp Uelgpeg. '483/4: 40

Tlej ctf uqp. 'N0*4223+0I gwkpi 'r gtuqpcn<'Y tkkpi /uqtkgu0kpvgtpcvqpcn'Lqwtpcn'qh'S wrkcvkxg
Uwflgu'lp'Gf wecvkp. '36*3+:'55/5: 0

Ueqw. 'F cy p' O 0'gv'cni0\$Ur cvkn'F kntkdwkqp'qh'Ucteqr vke O cpi g'Ucteqr vgu'uecdkxk'lp'Wtdcp
Hqzgu'*Xwr gu'xwr gu+'lp'I tgcv'Dtkckp'cu'F gvto kpgf d { 'Ekkk gp' Uelgpeg\$'Wtdcp
Gequ { ugo u'4507 '*4242+<'3349/620RtqS wgu0Y gd09 Qev042420

Vtngxu. 'C0'gv'cni0\$Uwv'Rt gugtxcvqp0'Dkqmi lecnEqpugtxcvqp. 'xqr044; . '423; . 'r r 0356663.
f qkj wr u<l f qkQti B2B238 l0kqeqp0423: B3B3: 0

Y crnej . 'Ctkcp'F 0'gv'cni0\$Uwo o qkpi 'eqo r cuukqp'vq cff tguu'y g'ej cmgpi gu'qh'eqpugtxcvqp0\$
Eqpugtxcvqp'Dkqmi { '5408 '*423: +<'3477/34870

.. | f go kt. 'Xwtcni0*4242+0\$Qpg'P cwtgö<'C'P gy 'Xqecdwrnt { cpf 'Hico g'ht'I qxgtcpeg
kppqxcvqp'lp'RquvEqxkf/3; 'Rrpgvct { 'J gcrnj 0C'Lqwtpcn qh'kvgi tvkxg'Dkqmi { . 'xqr04603

Appendix A.

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

Vj cpm{ qwhqt "{ qwt 'kpvgt gu'kp'r ctvek r 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'hggkpi 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 ctvek r cpwø j wo cp/cpko cni'kpvgtcev'kpu0Vj g'tgugctej gtu'j qr g'v' i gpgtcv'npqy rfi 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'tgo clp cpqp{o qwa0Ki{ qw'j cxg's wgu'kpu'cdqw'y ku'tgugctej . { qw'o c{ 'eqpvcev'lgppk'ht'Uej cwtg. 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