Crime Science Paper

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# Frame

* Worry about COVID-19 has been discussed in media + research as something which affects people’s emotional wellbeing and their behaviours.
* Drawing on research on worry about crime, we hypothesise that worry can have a range of effects, depending on how it is experienced.
* Specifically, building on classifying people as functionally/dysfunctionally worried, we categories people into three groups: Unworried, Coping, Struggling.
* Results indicate that some worry is actually good; those who are ‘Coping’ take precautions which don’t affect QoL, they have fewer negative outcomes and get back to socialising more so than either those ‘Unworried’ or those ‘Struggling’. ‘Struggling’ experience most negative outcomes, so these are people who should be identified for targeted interventions to help people deal with worry about COVID19. However, asking simply whether people are worried or not does not tap into this groups.
* Membership in groups associated with perceived risk (likelihood/ severity/ control) is better. One approach to reduce dysfunctional worry could be to try to inform people/create comms that address these factors?
* comms messaging like the above can help people move from dysfunctional to functional, we know people *can* move between groups because they moved between w2 and w3

# Results - descriptives

It seems that people do experience worry about COVID-19. When asked the question “In the past 3 weeks, have you ever felt worried about getting COVID-19?” in wave 2, 34% of people said that “No”, they had not felt worried about getting COVID-19 in the past 3 weeks. From those who said “Yes”, the specific instance of worry varied in frequency and intensity. 35% of people who were worried only experienced this “Once or twice” in the last 3 weeks, while 21% worried more than 10 times in this timeframe.

Criminological work has found that, while some instances of worry can be destructive and paralysing, people and communities have the potential to convert worry about crime into constructive action [@jackson2010functional; @jackson2009untangling]. In our study, the majority of people said ‘yes’ (85%) when we asked ‘do you take any precautions against getting Covid-19?’. This implies that this fear can be considered functional, as it conceivably triggered self-protective behaviours against the virus.

Based on their worries about catching the virus, as well as the self-reported effect of their worries, we can divide research participants into one of three groups:

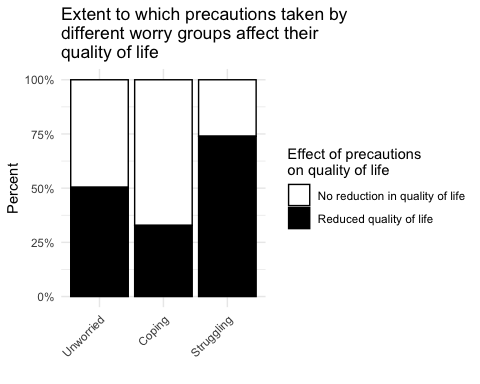
* The ‘unworried’ group (32%): those who had not worried once about catching Covid-19 over the previous three weeks;
* The ‘coping’ group (34%): those who had worried, but report that their quality of life was not affected by this worry; and,
* The ‘struggling’ group (27%): those who had worried, and reported that their quality of life was affected by this worry.

Table x shows some descriptive statistics of these groups across demographic measures (gender, age, ethnicity), measures related to covid19 (key worker, affected by covid, had covid), mental health/emotions outcome measurses, and behavioural outcomes (takes precautions, and whether those precautions affect quality of life).

## Unworried Coping Struggling  
## perc\_age\_16\_24 22 13 19  
## perc\_age\_25\_44 50 39 42  
## perc\_age\_45\_64 22 38 29  
## perc\_age\_65\_over 6 10 9  
## perc\_female 0 0 0  
## perc\_BAME 10 7 9  
## perc\_keyworker 18 16 17  
## perc\_had\_covid 16 9 19  
## w\_mean\_score\_affected\_by\_covid 0.103 0.119 0.172  
## perc\_worried 17 82 91  
## perc\_felt\_anxiety 45 50 77  
## perc\_felt\_anger 31 28 46  
## perc\_felt\_loneliness 41 34 60  
## perc\_not\_at\_all\_felt\_happiness 20 16 26  
## perc\_not\_at\_all\_satisfied\_w\_life 11 5 18  
## perc\_not\_at\_all\_worthwhile 7 4 9

# Results - for arguments

## Everyone takes precautions, but coping are less likely to report the precautions affecting their quality of life (vs unworried)



##   
## ==============================================  
## Dependent variable:   
## ---------------------------  
## precqof\_binary   
## ----------------------------------------------  
## foc19\_w2Coping 0.481\*\*\*   
## (0.176)   
##   
## foc19\_w2Struggling 2.793\*\*\*   
## (0.193)   
##   
## Constant 1.017   
## (0.126)   
##   
## ----------------------------------------------  
## Observations 969   
## Log Likelihood -519.628   
## Akaike Inf. Crit. 1,045.256   
## ==============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## Negative outcomes on emotional wellbeing

We compare the difference between groups and asking people a generic question "".

Evidently, measuring a generic “are you worried” is not that great because it groups together the functionally/dysfunctionally worried, instead looking at the groups shows that it’s those who are struggling that have these negative emotional wellbeing outcomes:

Felt worried:

##   
## ===============================================  
## Dependent variable:   
## ----------------------------  
## felt\_worried   
## (1) (2)   
## -----------------------------------------------  
## b\_covconc 1.299\*\*\* 1.033   
## (0.062) (0.083)   
##   
## foc19\_w2Coping 1.188   
## (0.194)   
##   
## foc19\_w2Struggling 3.889\*\*\*   
## (0.230)   
##   
## Constant 0.518\*\*\* 0.756   
## (0.227) (0.240)   
##   
## -----------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -630.274 -606.482   
## Akaike Inf. Crit. 1,264.549 1,220.964   
## ===============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Felt angry:

##   
## ===============================================  
## Dependent variable:   
## ----------------------------  
## felt\_anger   
## (1) (2)   
## -----------------------------------------------  
## b\_covconc 0.951 0.774\*\*\*   
## (0.064) (0.087)   
##   
## foc19\_w2Coping 1.180   
## (0.211)   
##   
## foc19\_w2Struggling 2.892\*\*\*   
## (0.232)   
##   
## Constant 0.623\*\* 0.869   
## (0.233) (0.246)   
##   
## -----------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -600.430 -586.588   
## Akaike Inf. Crit. 1,204.861 1,181.175   
## ===============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Felt lonely:

##   
## ===============================================  
## Dependent variable:   
## ----------------------------  
## felt\_loneliness   
## (1) (2)   
## -----------------------------------------------  
## b\_covconc 0.990 0.817\*\*   
## (0.061) (0.084)   
##   
## foc19\_w2Coping 0.964   
## (0.199)   
##   
## foc19\_w2Struggling 3.085\*\*\*   
## (0.224)   
##   
## Constant 0.809 1.145   
## (0.225) (0.240)   
##   
## -----------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -641.363 -618.532   
## Akaike Inf. Crit. 1,286.726 1,245.064   
## ===============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Not at all felt happy:

##   
## ===============================================  
## Dependent variable:   
## ----------------------------  
## not\_felt\_happiness   
## (1) (2)   
## -----------------------------------------------  
## b\_covconc 0.987 0.921   
## (0.075) (0.100)   
##   
## foc19\_w2Coping 0.864   
## (0.247)   
##   
## foc19\_w2Struggling 1.594\*   
## (0.262)   
##   
## Constant 0.266\*\*\* 0.306\*\*\*   
## (0.277) (0.288)   
##   
## -----------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -474.986 -470.983   
## Akaike Inf. Crit. 953.972 949.967   
## ===============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Not at all satisfied with life:

##   
## ===============================================  
## Dependent variable:   
## ----------------------------  
## not\_at\_all\_satisfied\_w\_life   
## (1) (2)   
## -----------------------------------------------  
## b\_covconc 0.963 0.860   
## (0.096) (0.130)   
##   
## foc19\_w2Coping 0.527\*   
## (0.355)   
##   
## foc19\_w2Struggling 2.240\*\*   
## (0.328)   
##   
## Constant 0.140\*\*\* 0.183\*\*\*   
## (0.352) (0.364)   
##   
## -----------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -322.396 -310.955   
## Akaike Inf. Crit. 648.791 629.910   
## ===============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Does not feel worthwhile:

##   
## ===============================================  
## Dependent variable:   
## ----------------------------  
## not\_at\_all\_worthwhile   
## (1) (2)   
## -----------------------------------------------  
## b\_covconc 0.838 0.737\*   
## (0.121) (0.164)   
##   
## foc19\_w2Coping 0.772   
## (0.437)   
##   
## foc19\_w2Struggling 2.226\*   
## (0.425)   
##   
## Constant 0.120\*\*\* 0.152\*\*\*   
## (0.426) (0.440)   
##   
## -----------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -219.542 -216.325   
## Akaike Inf. Crit. 443.083 440.649   
## ===============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Emotion score:

(Note recoded, for b\_covidemotion\_1 through \_3 11 as 1, 12 as 2, 13 as 3, 14 as 4, and 15 as 5, and for b\_covidemotion\_4 the reverse (11 as 5, 12 as 4, 13 as 3, 14 as 2, 15 as 1), so higher score = worse emotions outcome)

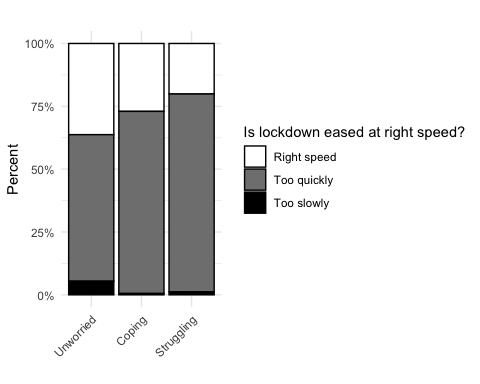
##   
## =====================================================================  
## Dependent variable:   
## --------------------------------------------------  
## emosum   
## (1) (2)   
## ---------------------------------------------------------------------  
## b\_covconc 1.033\*\*\* 0.989   
## (0.010) (0.013)   
##   
## foc19\_w2Coping 1.001   
## (0.033)   
##   
## foc19\_w2Struggling 1.276\*\*\*   
## (0.035)   
##   
## Constant 8.142\*\*\* 8.778\*\*\*   
## (0.038) (0.039)   
##   
## ---------------------------------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -2,229.362 -2,184.903   
## theta 89,443.580 (632,837.500) 142,943.500 (796,756.100)  
## Akaike Inf. Crit. 4,462.723 4,377.806   
## =====================================================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

We can also add the satisfaction and worth scores to the sum, in that case I’ve recoded to match the aboves (ie fliped 1 through 5, so higher score is worse outcome):

##   
## =======================================================  
## Dependent variable:   
## ------------------------------------  
## allemosum   
## (1) (2)   
## -------------------------------------------------------  
## b\_covconc 1.016\* 0.976\*\*   
## (0.009) (0.011)   
##   
## foc19\_w2Coping 0.997   
## (0.026)   
##   
## foc19\_w2Struggling 1.258\*\*\*   
## (0.028)   
##   
## Constant 14.197\*\*\* 15.232\*\*\*   
## (0.032) (0.031)   
##   
## -------------------------------------------------------  
## Observations 1,100 1,100   
## Log Likelihood -2,587.256 -2,529.273   
## theta 70.732\*\*\* (18.597) 210.759 (144.520)  
## Akaike Inf. Crit. 5,178.513 5,066.546   
## =======================================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## Re-engaging

Group people into whether the government is easing lockdown at the right speed, too slowly, or too quickly (c\_lockease and c\_locksp).



Group together “right speed” and “too slow” to have outcome be whether they perceive lockdown being eased too quickly or no. All worry groups more likely to say too quickly compared with unworried. General concern also significant:

##   
## ==========================================================  
## Dependent variable:   
## ---------------------------------------  
## quickease   
## (1) (2) (3) (4)   
## ----------------------------------------------------------  
## foc19\_w3Coping 1.892\*\*\* 1.507\*\* 1.507\*\* 1.463\*   
## (0.167) (0.197) (0.197) (0.198)   
##   
## foc19\_w3Struggling 2.596\*\*\* 1.932\*\*\* 1.932\*\*\* 1.722\*\*   
## (0.214) (0.252) (0.252) (0.257)   
##   
## c\_covconc 1.197\*\* 1.198\*\* 1.295\*\*\*   
## (0.082) (0.082) (0.087)   
##   
## c\_covknow 0.989 0.983   
## (0.120) (0.121)   
##   
## age 0.763\*\*\*   
## (0.096)   
##   
## genderFemale 0.949   
## (0.159)   
##   
## race\_codedBAME 1.075   
## (0.281)   
##   
## Constant 1.392\*\*\* 0.885 0.920 1.461   
## (0.107) (0.231) (0.492) (0.527)   
##   
## ----------------------------------------------------------  
## Observations 989 989 989 989   
## Log Likelihood -529.581 -526.451 -526.405 -521.927   
## Akaike Inf. Crit. 1,065.162 1,060.902 1,062.810 1,059.855  
## ==========================================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Are they reengaging more? We asked whether or not people engaged in the following behaviours in wave 2 and wave 3:

* Socialised in person with friends or relatives whom you don’t live with
* Went out for a walk, run, or cycle and spent more than a few minutes sitting somewhere to relax
* Travelled for leisure (e.g. driven somewhere to go for a walk)

In wave 2 these were breaking the regulations, but in wave 3 they were allowed to do these. So we can say if the score goes up, they re-engaged, whereas if it stays the same or goes down (weird) then they are not re-engaging.

Coded as: calculated a re-engagement score, which is the score for the compliance item in wave 2 subtracted from the sum of the compliance items in wave 3. This means higher score means more re-engagement (0 is same engagement, negative is more engagement in wave 2 than wave 3 (shouldnt be a lot of this in theory??) and positive is more participation in the activity in wave 3 than wave 2).

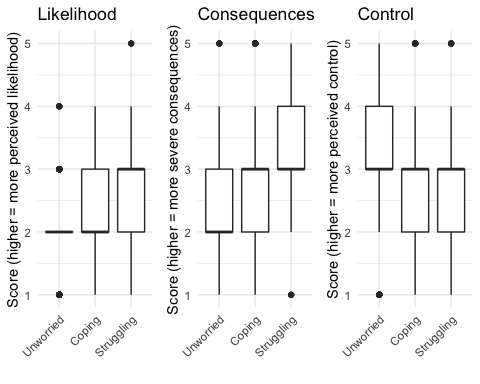
Coping people engage in more socialising:

##   
## ===============================================  
## Dependent variable:   
## ----------------------------  
## more\_socialising   
## (1) (2)   
## -----------------------------------------------  
## c\_covconc 0.926 0.834\*\*   
## (0.062) (0.081)   
##   
## foc19\_w3Coping 1.717\*\*\*   
## (0.194)   
##   
## foc19\_w3Struggling 1.261   
## (0.238)   
##   
## Constant 0.785 0.872   
## (0.219) (0.229)   
##   
## -----------------------------------------------  
## Observations 991 989   
## Log Likelihood -567.409 -561.212   
## Akaike Inf. Crit. 1,138.817 1,130.425   
## ===============================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## Risk perception

What makes someone coping/struggling/unworried? One thing that has shown to have effect on fear of crime is risk perception (perceived likelihood/control/consequence).

* Perceived Likelihood: “How likely do you think it is that, in the next 3 weeks, you will catch COVID-19?”
* Perceived Severity of Consequences: “If you contracted COVID-19, how severe do you expect its consequences to be on your health?”
* Perceived Control: “To what extent do you feel able to control whether or not, in the next 3 weeks, you will catch COVID-19?”



Unworried group have lower perceived likelihood and severity of consequences and higher perceived control, the Coping group are in the middle, and the Struggling group have the highest perceived likelihood and perceive most severe consequences!

##   
## ==============================================================  
## Dependent variable:   
## ------------------------------  
## c\_riskln c\_riskcn c\_risksn   
## (1) (2) (3)   
## --------------------------------------------------------------  
## foc19\_w3Coping 1.486\*\*\* 0.827\*\*\* 1.820\*\*\*   
## (0.048) (0.060) (0.063)   
##   
## foc19\_w3Struggling 2.148\*\*\* 0.824\*\*\* 2.785\*\*\*   
## (0.057) (0.071) (0.075)   
##   
## Constant 7.236\*\*\* 22.499\*\*\* 11.329\*\*\*   
## (0.032) (0.040) (0.043)   
##   
## --------------------------------------------------------------  
## Observations 1,018 1,018 1,018   
## R2 0.158 0.012 0.169   
## Adjusted R2 0.157 0.010 0.167   
## Residual Std. Error (df = 1015) 0.623 0.777 0.821   
## F Statistic (df = 2; 1015) 95.425\*\*\* 6.361\*\*\* 103.208\*\*\*  
## ==============================================================  
## Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

So one thing could be to target these perceptions with comms etc to help people out of ‘struggling’ group.

## Can people move between groups?

Yes, people move between groups! So a comms campaign like above suggested can help get people out of dysfunctional group.

While most people have stayed in the same group between the two waves (68%), almost a third (32%) moved between categories (Table x, Figure x).

## # A tibble: 9 x 2  
## # Groups: whochangedff [9]  
## whochangedff n  
## <chr> <int>  
## 1 Coping to Struggling 46  
## 2 Coping to Unworried 91  
## 3 Stayed Coping 180  
## 4 Stayed Struggling 175  
## 5 Stayed Unworried 310  
## 6 Struggling to Coping 90  
## 7 Struggling to Unworried 42  
## 8 Unworried to Coping 42  
## 9 Unworried to Struggling 13

Nicer visual:

![A picture containing screenshot

Description automatically generated](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAgsAAAGcCAYAAABX1OOoAAAACXBIWXMAAAsTAAALEwEAmpwYAAAgAElEQVR4AQDQgi99Af////8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAQEBAAEBAQABAQEAAQEBAAEBAQABAQEAAQEBAAEBAQABAQEAAQEBAAEBAQABAQEAAQEBAAAAAAABAQEAAQEBAAEBAQABAQEAAQEBAAEBAQABAQEAAQEBAAEBAQABAQEAAgICAAICAgACAgIAAgICAAICAgACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMDAwAZGRkAERERAOjo6ADt7e0AAAAAAAAAAAAAAAAAAAAAAPDw8ADw8PAAGBgYABcXFwAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD7+/sA7+/vAPDw8ADz8/MAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAICAgACAgIABAQEAAAAAAAAAAAAPr6+gD5+fkA+fn5APr6+gD4+PgA+fn5AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAICAgACgoKAAsLCwALCwsAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AAEBAQD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAD///8AAQEBAAAAAAD///8AAQEBAP///wAAAAAAAQEBAAAAAAAAAAAAAQEBAAAAAAAAAAAAAQEBAAAAAAABAQEAAAAAAAAAAAABAQEAAAAAAAAAAAABAQEAAAAAAAAAAAABAQEAAAAAAAAAAAABAQEAAAAAAAEBAQAAAAAAAAAAAAEBAQAAAAAAAAAAAAEBAQAAAAAAAAAAAAEBAQAAAAAAAAAAAAEBAQAAAAAAAAAAAAEBAQAAAAAAAAAAAAEBAQAAAAAAAQEBAAAAAAAAAAAAAQEBAAAAAAAAAAAAAQEBAAAAAAAAAAAAAQEBAAAAAAAAAAAAAQEBAAEBAQACAgIAAQEBAAEBAQABAQEAAQEBAAICAgABAQEAAQEBAAEBAQACAgIAAQEBAAEBAQABAQEAAQEBAAICAgABAQEAAQEBAAEBAQACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAICAgAICAgABAQEADo6OgA9fX1AAAAAAAAAAAAAAAAAAAAAADo6OgA8PDwABcXFwAUFBQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADy8vIA7+/vAO/v7wD9/f0AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABgYGAAYGBgANDQ0AAAAAAAAAAAAAAAAA+fn5APn5+QD5+fkA+fn5APn5+QD6+voAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABQUFAAoKCgAKCgoACwsLAAUFBQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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