Plunge Stats 2019-2020-2021

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##Introduction Here I have taken the Classy registration data from the 2019, 2020, and 2021 Burlington Plunges. Let it be noted that these datasets do not include Cool Schools. Each dataset has been split into 3 distinct versions, the first being everyone who registered, the second being everyone who paid 0 dollars for their ticket, and the third being everyone who's gross fundraising amount was 0.

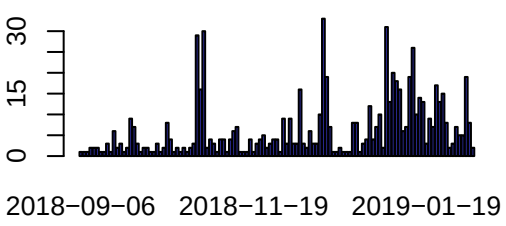
##Initial Observations The number of people who registered in 2019 and 2020 are very similar, 741 and 715 respectively. 2021 shows a massive decline in registration to 293, which is clearly due to COVID-19. The real problems arise in ticket payments and fundraising. 33.3% of registrees in 2019 did not pay for their ticket. 29.4% did not pay for their ticket in 2020. 44.7% did not pay in 2021. As for people who recorded a 0 in fundraising, it was 11.6% in 2019, 6.4% in 2020, and 15% in 2021. It is not a terrible number given the year, but as registration numbers go back up, we want that percentage to go back down.

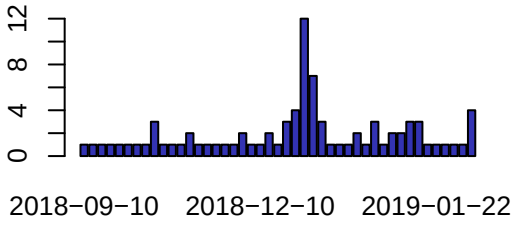
```
multifig(2,2)
```

```
## Usage: multifig(rows,cols)
```

```
## [1] "OK"
```

```
barplot(counts2019, col = rgb(.2, .2, .7))
barplot(fundcounts2019, col = rgb(.2, .2, .7))
```





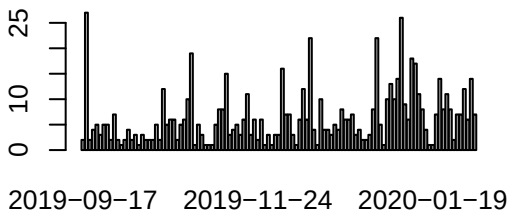
#Comparing Registration Dates by Fundraising 2019 In this graphic, we show two graphs from 2019, one showing the registration dates for everyone, and the other showing the registration dates of those who had 0 for fundraising. There are some obvious spikes in registration, likely when communications were sent out. There is also a clear spike in December where many people registered, but a high percentage of those people had 0 fundraising. Why is that? There are two takeaways, one is that communications work, and we need to be strategic with them. The second is that we need to find out why so many people that registered on one day did not fundraise.

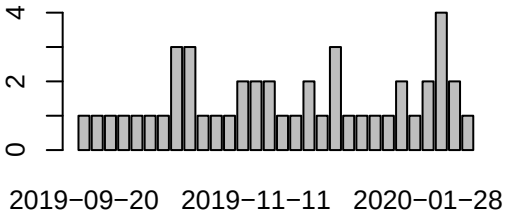
```
multifig(2,2)
```

```
## Usage: multifig(rows,cols)
```

```
## [1] "OK"
```

```
barplot(counts2020)
barplot(fundcounts2020)
```





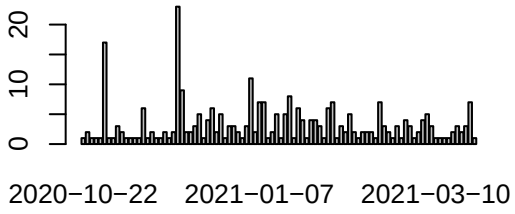
#Comparing Registration Dates by Fundraising 2020 This is the same comparison as above, but with 2020. The first things to notice is the moreso uniform distribution of registrations. There are still spikes, but in general it is more even. By far the largest spike of registrations happened in September, meaning we did an early communication that really worked. Also notice of the people that registered that early, only one had a 0 for fundraising. We need to duplicate that in this years plunge.

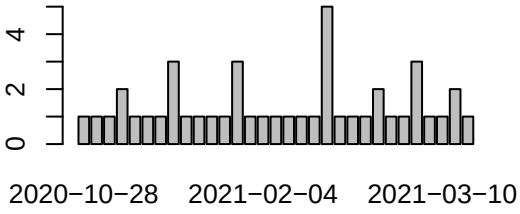
```
multifig(2,2)
```

```
## Usage: multifig(rows,cols)
```

```
## [1] "OK"
```

```
barplot(counts2021)
barplot(fundcounts2021)
```





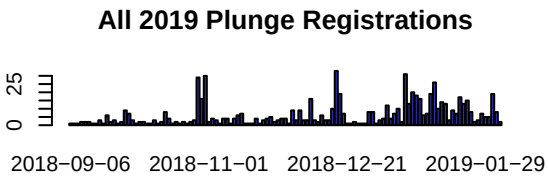
#Comparing Registration Dates by Fundraising 2021 2021 data shows limited registration numbers as expected, but two clear spikes quite early on, likely due to communications. In contrast to the previous years, we see a much smaller spike right before the event which is understandable given COVID, but we certainly want a last call for people to register. We once again see one day where the majority of people who registered did not fundraise, why?

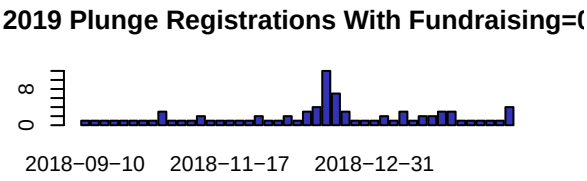
```
multifig(3,2)
```

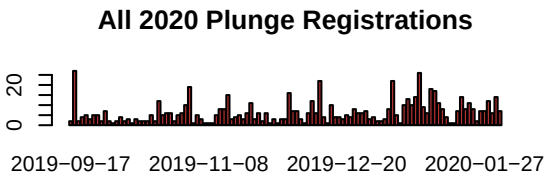
```
## Usage: multifig(rows,cols)
```

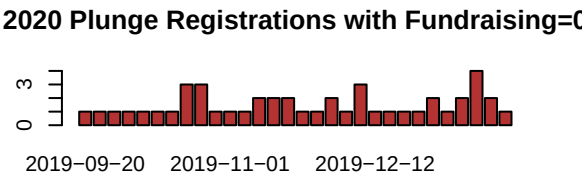
```
## [1] "OK"
```

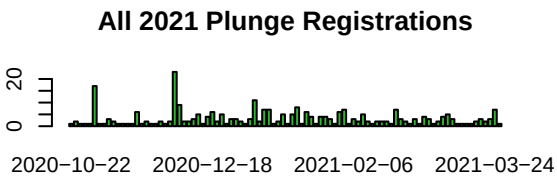
```
barplot(counts2019,col = rgb(.2, .2, .7), main ="All 2019 Plunge Registrations")
barplot(fundcounts2019,col = rgb(.2, .2, .7), main ="2019 Plunge Registrations With Fundraising=0")
barplot(counts2020,col = rgb(.7, .2, .2), main ="All 2020 Plunge Registrations")
barplot(fundcounts2020,col = rgb(.7, .2, .2), main ="2020 Plunge Registrations with Fundraising=0")
barplot(counts2021,col = rgb(.2, .7, .2), main ="All 2021 Plunge Registrations")
barplot(fundcounts2021, col = rgb(.2, .7, .2), main ="2021 Plunge Registrations with Fundraising=0")
```

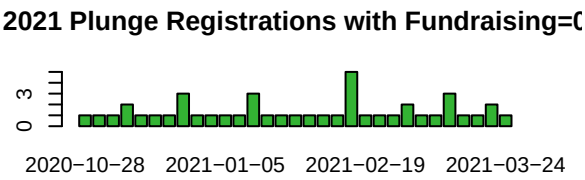












#Comparing all Plots Here we show all of the previous plots next to eachother. The main takeaways are that communications are effective, but we need to be strategic. We need to communicate as soon as possible to get the committed fundraisers on board early, and continue communications up until the event. We also need to gauge how many people we can allow to register without paying ticket price, although they may contribute in other ways (as part of their organization), there is potential that we lose money through no ticket fee.

#Averages per person 2019- Avg Fundraising per person = $410.71 Avg Ticket price per person = $18.81

2020- Avg Fundraising per person = $540.73 Avg Ticket price per person = $20.78

2021- Avg Fundraising per person = $575.55 Avg Ticket price per person = $16.11

We actually had the highest fundraising average per person in 2021, we just had way less people. The interesting part is that, as mentioned in "Initial Takeaways", 2021 had both the highest percentage of people who had 0 fundraising, and who didnt pay for their ticket. This is evident in the average ticket price being the lowest of the three years, but the average fundraising per person is the highest of the three years. We need to make sure those who were so great at fundraising in 2021 return, as well as recruit more people. Spreading the message that we are in need of funds due to COVID, and how appreciative we are should keep the average fundraising up, and the percentage of those who didnt fundraise down.

#Top Takeaways 1. Communicate soon and strong 2. If people register, FUNDRAISE 3. Weigh how effective giving sponsors discount on ticket prices are 4. How to encourage people to really push for their fundraising goal (gently but firmly)