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IN THE COURT OF APPEAL
CRIMINAL DIVISION

Royal Courts of Justice
The Strand
London
WC2A 2LL

Thursday 27th July 2017

B e f o r e:

LORD JUSTICE GROSS

MR JUSTICE SPENCER

and

HIS HONOUR JUDGE MARSON QC
(Sitting as a Judge of the Court of Appeal Criminal Division)

R E G I N A

- v -

ADAM LEWIS CHRISTOPHER MUDD

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Mr B Cooper appeared on behalf of the Appellant

Mr J Polnay appeared on behalf of the Crown

J U D G M E N T
(Approved)

Wednesday 27th July 2017

LORD JUSTICE GROSS:

1. On 21st October 2016 at the Central Criminal Court before His Honour Judge Topolski QC the appellant (now aged 20) pleaded guilty. On 25th April 2017 he was sentenced by Judge Topolski as follows: on count 1, doing unauthorised acts with intent to impair the operation of computers, contrary to section 3(1) and (6) of the Computer Misuse Act 1990, 24 months' detention in a young offender institution; on count 2, making, supplying and offering to supply an article for use in an offence, contrary to section 1 or 3 of the Computer Misuse Act 1990, nine months' detention concurrent; and on count 3, concealing criminal property, contrary to section 327(1) of the Proceeds of Crime Act 2003, 24 months' detention concurrent. The total sentence was, therefore, 24 months' detention in a young offender institution.

2. The appellant appeals against sentence by leave of the single judge.

3. The facts are not run of the mill. On 3rd March 2015, a search warrant was executed at the home address of the appellant. He was arrested under the Computer Misuse Act for activities including the running of a DDoS (distributed denial of service) through a program which he had devised called the Titanium Stresser. He was in his bedroom at the time of the arrest and on his computer which he initially refused to unlock. The police officer spoke to his father and in due course the appellant voluntarily unlocked his computer to facilitate a live examination.

4. We record at once that the appellant's very supportive family knew nothing whatever about his activities at the time.

5. A search was conducted of his home. A number of items were seized. Of particular note were a DVD case containing £240 cash, a tower computer and an image file of his C drive. He was taken to the police station and his mobile telephone was seized.

6. In interview he gave a prepared statement in which he admitted creating the Titanium Stresser, but stated that he had not been involved in any criminality. He exercised his right of silence in relation to questions which he was asked. He was then released on police bail pending further investigation. Inevitably, an investigation in such a case would take some time and it did here.

7. Forensic examination of the exhibits seized produced a report of findings stating that the Titanium Stresser was an online booter/stresser service provided to individuals who would pay a subscription in order to carry out DDoS attacks against users of the World-Wide-Web. In essence, a DDoS attack was an assault on a network that flooded it with so many additional bogus data requests that regular traffic was slowed or in some cases completely interrupted. So, what had happened here was that the appellant devised the program which he then supplied to others for the purpose of their launching DDoS attacks and, as will be seen presently, he launched some of those attacks himself.

8. A total of 41 uniquely identifiable databases were identified on his computer, 36 of which contained user data of persons paying and carrying out DDoS attacks on their chosen victims.

9. There were 112,298 registered users or customers. In total, 1,738,828 attacks were carried out, directed against 666,532 individual IP addresses or domain names, of which 52,836 were geographically located in the United Kingdom.

10. Pausing there, we do not lose sight of the fact that some of the numbers are disputed, but not to any significant extent so as to alter the overall view of the offending. It is also immediately apparent that the offending was international in scope with regard to the addresses or domain names outside the United Kingdom.

11. Some IP addresses were attacked on more than one occasion. In addition, an examination of the appellant's phone and computer revealed a large number of Skype chats. Some of these chats showed the sale of time on the Titanium Stresser for DDoS attacks to the appellant's knowledge. They also showed evidence of money laundering. The appellant personally carried out some 593 personal attacks.

12. On 16th September 2014, his school, West Herts, was subjected to a DDoS attack in which the appellant stated in a Skype conversation that he took down his college all day. He admitted at a later interview that he was responsible for this attack. There was also an individual attack against a computer gaming company, RuneScape, and the head of business intelligence produced a commercial report showing that in real terms the cost to the company of the attacks totalled £184,000 in direct revenue not received as a result.

13. A number of databases were discovered during the examination of the appellant's C drive. From these a number of spreadsheets were produced showing that he received a total of 269.81 bitcoin for packages on Titanium Stresser. Thus, even though the price of bitcoin fluctuated widely during the time in question, the total value in packages sold appears to have been US$74,306.40. There were also thousands of PayPal transactions and Pay safe transactions. The total value of all transactions that related to Titanium Stresser came to US$237,624.75. In total, the appellant received US$381,604.75 from Titanium Stresser and other DDoS tools supplied. When converted at the exchange rate on the day of his arrest, this equated to some

£248,000. Again, there is some dispute about the figures, but it is not of any meaningful significance.

14. When initially interviewed, the appellant gave a prepared statement stating that he had not been involved in any illegal activity. As already noted, he exercised at that stage his right of silence. At later interviews, he accepted that he willingly ran the Titanium Stresser as a "for hire DDoS service", and admitted that the movement of funds through PayPal was money laundering. A number of individual incidents were put to him and, in the main, denials were made. He did, however, admit a DDoS attack on West Herts (his college) in September 2014.

15. There was a basis of plea, but it was resolved as already indicated. There were matters which were not accepted, but ultimately the judge took the view that the differences between the Crown case and the appellant's case were not such as would impact on the sentencing exercise. Hence, for completeness, we have simply recorded the matters which had not been accepted.

16. There were a number of reports available to the sentencing judge, and which it is plain that he had well in mind. We take a moment to recount them. A pre-sentence report, dated 20th December 2016, indicated that the appellant suffered from autism. The author of the report was in no doubt that it was this condition that had been at the centre of his difficulties. While a large amount of money had flowed into his PayPal account, the appellant's motivation was more to do with a perception he gained about himself as a clever person, rather than the failure he had lived with as he was growing up. In short, this was about his perception of himself rather than for financial gain, though financial gain there was. Since his detection by the authorities, it was obvious, both by his demeanour and the manner in which he presented himself, that he had come to realise the gravity of his behaviour and the penny had dropped as to the wrongfulness of his conduct and the shame he had brought on himself and his family. There were no previous

convictions. He had learned a severe lesson. Despite his autism, he presented a low risk of further offending and a low risk of causing serious harm to the public. The author feared that sentencing him to custody would break him as a person and so the proposal was for a suspended sentence order with rehabilitation activity requirements and unpaid work requirements. He could pay financial penalties as appropriate.

17. Next, there was a psychological report, dated 30th December 2015, prepared at the behest of his parents. The author of the report opined that developmental history taken from his parents supported a diagnosis of autistic spectrum disorder. The examiner's observation of him indicated that the appellant was above the threshold for autistic spectrum disorder.

18. There was a further psychological report, dated 4th November 2016. The opinion of its three authors was to the effect that their views were consistent with those contained in the psychological report to which we first referred, and that there was clear evidence of behaviours typically associated with autism. The authors also noted that his earlier diagnosis of dyslexia and dyspraxia were commonly seen in individuals with autism. The authors concurred with the other psychological report, that he presented an autism spectrum disorder. His offending "had a function of meeting his emotional and social needs rather than being for financial gain". Accordingly, targeting the development of skills in this area would be an important factor in reducing the risk of re-offending. He would, of course, benefit from work to improve his functioning and enable him to live more independently. He was likely to have significant difficulties coping within a custodial setting. The authors recommended a community-based sentence, with a focus on rehabilitation.

19. There was a still further report to consider if the appellant might have Asperger's Syndrome. The author of that report was of the view that he indeed warranted a diagnosis of Asperger's

Syndrome. This was said to reduce his culpability at the time of the offending because of his age and because of the absence of a correct diagnosis hitherto. There was accordingly no risk of re-offending now that he had been correctly diagnosed.

20. Finally, there was a psychiatric report dated 21st April 2017. Again, there was concurrence as to the autism spectrum disorder. He would fall into the category of high functioning autism. Individuals with Asperger's Syndrome often showed an interest in computing and thus one could expect that the condition was over-represented in cybercrime. An individual with Asperger's Syndrome, though aware that an action was wrong and could cause harm, may have no sense of what this meant to the individual or organisation. The author pointed out that, although he was now 20, the appellant was only 16 when the offences began and at a time when his autism had not been detected. It would be reasonable to say that for many people the difference between a 16 and a 20 year old was considerable. That might be more so with the appellant. He was vulnerable, and custody would bear hard on him. The author considered that the likely repetition of his offending was low.

21. The court had in mind moving letters written by the appellant's family, as indeed we today have in mind a further letter received from his parents this morning. We also, as did the judge, take note of an offer of employment which was before the court.

22. In passing sentence, the judge said that at the start of the indictment period the appellant, who was then of good character and from a perfectly respectable and caring family, was 16 years and 9 months old. By the end of the indictment period he was 18 years and 3 months old. On the day he entered pleas of guilty to the three counts on the indictment, he was 19 years and 11 months old. He was at sentence (and now) 20 years old.

23. Counts 1 and 2 were multiple counts. Count 3 amounted to concealing criminal property in the amount of US$381,000.

24. The judge referred to the basis of plea. He observed that there was psychological and psychiatric evidence. The prosecution accepted that the appellant suffered from Asperger's Syndrome. The diagnosis of autism amounted to some mitigation, but did not absolve him from criminal responsibility.

25. The appellant's counsel submitted to the judge that he was entitled to full credit for his guilty plea and that the court's focus should be on the supervening diagnosis and the progress he had made in the period between arrest and sentence, which amounted to a period of two years. That was of particular significance for him, given his developmental and emotional disabilities. Counsel invited the court to follow the recommendation in the pre-sentence report and impose a suspended, rather than an immediate, sentence of detention.

26. There were no sentencing guidelines relating to the offences charged in counts 1 and 2. In the judgment of the court, the offences committed in counts 1 and 2 fell into a very high level of culpability. The appellant carefully and with considerable patience and determination first created and then marketed and sold a product, the sole purpose of which was to enable over 112,000 of his registered users to launch no less than 1,738,828 attacks against well over half a million individual IP addresses, of which nearly 53,000 were in this country.

27. The map of the world that showed the geographical spread of these attacks was revealing. It demonstrated the truly worldwide nature of this criminality. IP addresses from Greenland to New Zealand, from Russia to Chile were attacked by users of the appellant's creation. The duration of these attacks was approximately 18 months. One company, RuneScape, lost revenue

amounting to just under £185,000, and the attack on his college affected a further 70 schools and higher educational establishments with unknown potential consequences. In addition, there was clear evidence not only of actual damage, but also of considerable financial benefit to the appellant.

28. There were a number of aggravating features: the size of his user database; the large number of attacks; the actual and potential damage caused; the degree of sophistication involved in several aspects of his conduct; the fact that the conduct persisted over a prolonged period of time; the fact that websites of educational establishments were attacked; and the fact that very significant sums of money were received, albeit that the court was satisfied that financial gain was not the main motivating factor.

29. There were, on the other hand, a number of important mitigating features. The vast majority of the fees paid never reached the appellant, but were in the main frozen in the PayPal accounts. The offending was a by-product of his condition, which at that point had not been formally diagnosed. His age at the time when some of the offending took place was significant. Of equal importance to his age in terms of mitigating factors was the issue of autism. The delay that took place between arrest and arraignment could not be the subject of proper criticism. The complexity and enormity of the investigation into a case of this kind could only be guessed at. His previous good character was clearly another important mitigating feature, as were his guilty plea. In this regard, the court indicated that a discount of no more than 25 per cent was appropriate.

30. The court was made aware of an offer that the appellant had received of possible employment from a company delivering security consultancy who wished to consider using his undoubted skills in cyber security, and had considered that with care. The court had noted what

he and his parents had said about it and had little doubt that similar opportunities would present themselves in the future. Notwithstanding his condition, the appellant knew full well that he was committing serious crime and in doing so was taking a risk with his liberty, yet he continued with his illegal activities for some time.

31. Given all the circumstances of the case and the very considerable seriousness of it, had it been contested, and had he been an adult of good character without any difficulties, the court would have passed a total sentence in the order of six years or 72 months' custody. In the light of his age, his diagnosed condition, the delay between arrest and the entering of his pleas of guilty, the court was able to reduce that period substantially to 32 months' custody. That figure was reduced further by the 25 per cent discount for the plea of guilty. Hence, the total sentence of 24 months already described.

32. The court came to the reluctant but sure conclusion that it was unable to suspend the sentence in light of the timespan and the seriousness of his offending, the level of his culpability and the harm caused or foreseen.

33. The sentencing remarks which we have now summarised also contain one or two other observations to which we specifically draw attention. As to payment, (at page 8) it may be noted that the appellant created 328 separate PayPal accounts all under false details. He used highly sophisticated techniques to disguise the source of the funds he was receiving, as well as making attempts to stop PayPal from accessing those sites. It is unnecessary to repeat in more detail the number of the attacks, but the judge clearly had in mind the scale of the offending.

34. The judge, as already indicated, had proper regard to the appellant's medical condition but, as he pointed out (at pages 16 to 17), that condition cannot and does not absolve him from

criminal responsibility. The judge said, very fairly, that where a diagnosis of autism or Asperger's is established, as the judge accepted it was in this case, that must be taken into account in determining the appropriate sentence. The question remained as to whether it should be determinative of what the sentence must be.

35. The judge made further references to the scale of criminality (pages 22 to 23) and referred (at page 26) to the "very considerable public interest in and concern about criminality of this kind. I cannot ignore those wide considerations in passing sentence in this case. Offending of this kind, which was both facilitated by and carried out by this [appellant] has the potential to cause great and lasting damage, not only to those directly targeted but also to the public at large. It is now impossible to imagine a world without the internet. There is no part of life that is not touched by it in some way. These offences may be relatively easy to commit but they are increasingly prevalent and the public is entitled to be protected from them. It follows that any sentence passed in a case of this level of seriousness must involve a real element of deterrence".

36. The judge drew attention (at pages 31 to 32) to a revealing exchange with a customer. The customer referred to himself as "Chicken Putty" and asked if the offender realised that his conduct could put him in jail. The appellant replied that he did. The exchange continued as follows:

> "CHICKEN PUTTY: Are you saying we are money launderers?
>
> THE APPELLANT: Yes. Money laundering is the process whereby the proceeds of crime are transformed into ostensibly legitimate money or other assets."

37. Finally, the judge pointed out (at pages 32 to 33) that he was satisfied that the appellant knew full well that this was not just a game for fun, but a serious money-making business and

that his popular software was doing exactly what he had created it to do.

38. There are essentially two grounds of appeal advanced before us today by Mr Cooper. The first is that the judge was wrong not to suspend the sentence. The second is that the judge erred in granting the appellant a 25 per cent discount, rather than a full one-third discount.

39. Mr Cooper's submissions, shortly summarised, focused on the appellant's co-operation with the police on arrest, his admissions in interview and the fact that all these matters warranted a full discount, rather than 25 per cent. The judge had failed to see an alternative means of satisfying the need for a deterrent sentence when he could have opted for a suspended sentence, with appropriate supervision and other orders. In passing sentence the judge had failed to pay sufficient regard to the appellant's compelling mitigation, his strong remorse, his full co-operation with the police, his guilty pleas, and his reform and extensive rehabilitation over the duration of the lengthy proceedings.

40. In his written submissions, to which Mr Cooper invited us to pay full attention, and which we have, he said, amongst other things, that the appellant's parents had longstanding concerns about his health. They alluded to his withdrawal from social life; the difficult time he had had at school, while his condition remained misdiagnosed; and the fact that these activities had started off from computer gaming and had then developed through his entrepreneurial talent into something which resulted in unlawful activity.

41. Mr Cooper specifically reminded us of the pre-sentence report, amongst the other reports which are before us. We have already referred to that.

42. Later, Mr Cooper referred to a large number of factors in support of the appellant's

mitigation.

43. Developing all these submissions today, Mr Cooper's submissions came to this: that we should now, on appeal, suspend the sentence; much of the offending took place when the appellant was aged 16 or 17; we should have regard to the guidelines for sentencing youths; there was no "cliff edge" just because he reached 18; the key focus for this vulnerable appellant should be on his lasting and full rehabilitation; there had been a very long period between his arrest and sentencing; no criticism was made of that period, but over its full duration the appellant had worked hard and had been fully engaged towards his own rehabilitation. That had been difficult for him because he had been required to and had desisted from any use of the internet, such use previously having been obsessive. In all this, there was the role of his parents, what they could offer in assisting his rehabilitation, which far surpassed that which could be offered in detention.

44. For the Crown, Mr Polnay properly did not address us on the issue of immediate custody or a suspended sentence.

45. We deal first with that question. Was the judge in error in not suspending the sentence? This was not an easy sentencing exercise. It was conducted with impressive skill and diligence. We pay tribute to the judge's careful sentencing remarks. There are no guidelines for counts 1 and 2. As with any sentencing exercise, it is necessary to have regard to culpability and harm. Regard needs to be had to an element of deterrence and punishment: see section 142 of the Criminal Justice Act 2003 and Archbold, at 5-71. It is almost unnecessary to belabour the seriousness of cybercrime and the grave view that the court will take of it.

46. Conversely, the court will plainly have regard, and must have regard, to factors such as

youth, the impact of a defendant's medical conditions, where applicable, his plea and other mitigating factors. In the case of a young offender, there is also the focus on rehabilitation. That is a matter which does not suddenly cease to be of importance the moment the offender reaches his or her 18th birthday.

47. To all these matters the judge paid careful regard. He took full account of the appellant's youth. He took full account of the appellant's medical conditions – autism and Asperger's – together with the impact they had on culpability and the difficulties they would or might impose on the appellant in serving a sentence in custody. The judge carefully analysed the appellant's knowledge that what he was doing was illegal and risked custody. The judge highlighted that this was much more than a game and that the appellant knew it. There were financial rewards, though the judge did not regard those rewards as motivating the appellant. The judge inevitably underlined the prolonged period of criminal conduct, as well as the scale of the offending.

48. To repeat, there were (give or take those which were disputed) some 1.7 million attacks directed against 666,000 individual IP addresses, 52/53,000 of which were in this country. Even if those were reduced somewhat, this remains, in our judgment, prodigious offending. It will be noted that the judge reduced what would have been a sentence of six years' custody on an adult defendant after a trial, assuming such a defendant did not have the medical conditions the appellant had, to one of 32 months' custody (less discount for the guilty plea).

49. With these considerations in mind, we are unable to say that the judge was in error in not suspending the sentence. We have very much in mind every parent's worst nightmare in a case such as this. We are deeply sympathetic to the position in which his parents find themselves. But, against that, this was cybercrime on a substantial scale which the appellant pursued, although he knew it was illegal and wrong. He created, wrote and marketed a computer

program to target websites, bombard them and cause disruption. The harm done was considerable. We reach our conclusion with regret – a regret plainly equally felt by the judge – but with no real hesitation, despite the appellant's obvious potential – and many offenders in this area do have such potential – and we hope that he can put that potential to full and proper use as and when these matters are behind him.

50. Having regard to the most recent Sentencing Council Definitive Guideline: Imposition of Community and Custodial Sentences, we are driven to the conclusion that the appropriate punishment can only be by way of immediate custody. It is of the first importance that the courts send a clear message: illegal activities of this nature on this scale are not a game; they will be taken very seriously by the courts and punished accordingly. We uphold the immediate custodial sentence.

51. We turn to the second point argued, which is the credit due for the appellant's guilty plea. The approach of the courts in this area is straightforward. There has been, and continues to be, a consistent drive on the parts of the court to bring certainty. That is very important for legal advisers and their clients. It is also very important to the system as a whole. A plea of guilty enables resources to be directed towards those cases which are going to be fought, and enables cases in which a guilty plea is tendered to be disposed of as soon as possible. A plea of guilty is thus of significant importance to the running of the system. It is also something which reflects perhaps remorse and certainly recognition of the offending on the part of the offender. For those reasons the courts are very anxious to provide guidelines which indicate when an offender will be given full credit and when he will not. It is very simple. If he chooses not to plead guilty at the earliest reasonable opportunity, he will lose some part of that credit.

52. What happened in this case was this. The appellant was arrested on 3rd March 2015. There

was, as Mr Cooper neatly put it, "incremental co-operation". But certainly by 9th September 2015 there had been a number of interviews and the appellant had in fact made a very large number of admissions to the computer misuse offences. In 2016 he was arrested for money laundering, and he indicated that he was content with the admissions he had earlier made. He was finally charged on 10th August 2016. There was a hearing at the magistrates' court – a plea before venue hearing – on 9th September 2016. There were then four counts, but in substance to the same effect as the indictment to which he ultimately pleaded. All that happened subsequent to 9th September was that the four counts were compressed into three. Most unfortunately, no indication of plea was given on that occasion. The consequence was inevitable. Much time and money was expended by the prosecution preparing full bundles for the Crown Court. That is how the system works.

53. In due course, on 21st October 2016 (five weeks later) there was a plea and trial preparation hearing. On that occasion the appellant pleaded guilty.

54. Having ascertained those facts, we are bound to say that if they rested there we would have no hesitation in upholding the judge's ruling that the appellant's credit should be limited to 25 per cent. The reason for that is that the appellant had legal representation through the interviews when he made the various admissions. If that same legal representation had been present at the magistrates' court, we would have seen no conceivable reason to depart from the judge's ruling. But the facts, as individual cases often show, can never be stereotyped. What happened here was that on the day of the magistrates' court hearing, we are told by Mr Cooper – and it is not disputed by Mr Polnay – that the solicitor who had previously had the conduct of the matter was ill and therefore was not present. A colleague of his attended. Also, on that day the Crown served its disk of evidence. The solicitor then in attendance took the view that he would not indicate the appellant's plea, but instead asked for time to consider the disk. Hence, the five

weeks and the guilty plea at the pre-trial preparation hearing.

55. In all those circumstances, we discern the following features:

(1) The appellant had been frank with the police, at least from the time of his earlier interviews.

(2) The appellant is vulnerable because of his various medical conditions; he was not the sort of individual to overrule the advice given by the solicitor on the day.

(3) The disk was only received on the day of the magistrates' court hearing. That, we pause to underline, lest it be misunderstood, would not by itself be a reason for not pleading or indicating a guilty plea on the day.

(4) There was the additional feature that the solicitor on the day was unfamiliar with the matter, as we are led to understand, and was not the same solicitor who had been present at the interviews. Mere unfamiliarity would not of course assist; legal representatives who attend Court are required to makes themselves familiar with the case in question. But, here, the reason for the unfamiliarity was that the solicitor attending on the day was deputising for a colleague on the ground of illness.

Exceptionally, therefore – and we do not see this case in this regard as a precedent for any other case – we are minded to think that the appellant's full one-third credit ought to have been preserved. The only reason we part company from the judge in this regard is that it is far from

clear to us that that final feature concerning representation on the day was before him. If the judge was somewhat troubled about what exactly the facts were, we have every sympathy with him. We ourselves were likewise troubled until we delved into the matter more deeply today.

56. In those circumstances – and only on that point – we part company with the judge. Pulling the threads together: (1) we uphold the judge's sentence of immediate custody in principle; (2) we depart from the judge only in respect of the discount for the guilty plea; (3) we think that, for the reasons we have given, the judge was wrong to limit the credit to 25 per cent; instead, **exceptionally**, we take the view that it should have been a one-third reduction; (4) we accordingly quash the sentence of 24 months' detention and substitute a sentence of 21 months' detention in a young offender institution; (5) to such extent, and such extent only, we allow the appeal.