Venezuela

C Violations of User Rights

Internet users and digital reporters continued to be arbitrarily arrested for sharing critical content online. Significant surveillance occurred throughout the coverage period, including a phishing attack that targeted a platform created by the government opposition to allow health workers to register for assistance. Further, a report emerged that telecommunications companies assist the state in monitoring political opponents. Technical attacks against media outlets appeared to be linked to the armed forces.

C1 1.00-6.00 pts0-6 pts

Do the constitution or other laws fail to protect rights such as freedom of expression, access to information, and press freedom, including on the internet, and are they enforced by a judiciary that lacks independence?	1.001 6.006

Although the constitution guarantees freedom of expression,[109] the government has passed laws and regulations that curtail this right. Several laws, such as the 2017 anti-hate speech law and the Resorte Law, provide avenues for limiting speech that is deemed to incite hatred, violence, or "anxiety" among the population, including on the internet. Moreover, the prolonged state of exception, in place since 2016, included provisions on countering cyberthreats, authorizing regulations to prevent "destabilization campaigns."[110] Activists and journalists also face charges of defamation under the penal code, which sets out prison sentences for defamation against public officials and the publication of false information.[111]

Power has increasingly concentrated in the executive, and the judiciary is highly politicized. In June 2019, the Supreme Court ordered the site La Patilla to pay $5 million to Diosdado Cabello, the current, proregime president of the National Constituent Assembly. Cabello had lodged a defamation complaint against the outlet for a 2015 article that linked him to drug traffickers. La Patilla had appealed a lower court's 2017 order that it pay around $500,000. The Committee to Protect Journalists claimed that the disproportionate fines imposed on La Patilla constituted an "attempt to bankrupt and shut down a critical outlet" and "is the latest example of how the Venezuelan judicial system is being used to retaliate against critical media."[112]

To bring more power to the executive, and acting against the provisions of the constitution, Maduro convened a National Constituent Assembly by presidential decree in May 2017. Installed in August that year and composed exclusively of pro-Maduro supporters, this new de facto legislative body was handed sweeping powers over other state institutions. According to the World Justice Project Rule of Law Index 2020, which evaluates 128 countries, Venezuela

ranks last.[113]

Legislative proposals signal moves to further broaden surveillance and control over the digital sphere in Venezuela. In January 2019, a leak to the media revealed that the National Constituent Assembly was drafting a bill called "Constitutional Law of the Cyberspace of the Bolivarian Republic of Venezuela."[114] The text revealed plans to create a single authority that would determine the “correct use of cyberspace,” perform unlimited surveillance tasks, apply sanctions, and adopt preventive measures against what the government considers to be cyberthreats. As of May 2020, the bill had not been considered by the assembly.[115]

C2 1.00-4.00 pts0-4 pts

Are there laws that assign criminal penalties or civil liability for online activities?	0.000 4.004

The Maduro government has tightened its grip on online speech through a series of restrictive laws establishing criminal penalties for online activities. A vaguely worded anti-hate speech law enacted in 2017 imposes hefty prison sentences of 10 to 20 years for those who incite hatred or violence through any electronic means, including social networks. It also establishes that intermediaries can be fined if they do not remove the messages subject to sanctions within six hours of their dissemination, with amounts ranging between 50,000 and 100,000 tax units.[116]

The Resorte Law, which was amended by the National Assembly in 2010, also includes vague prohibitions and severe sanctions that grant authorities sweeping discretion to restrict speech. Article 27, for example, forbids messages that promote anxiety among the population, alter public order, disregard legal authorities, or promote the violation of existing laws.[117] The law also establishes intermediary liability for content posted by a third-party and requires online media to establish mechanisms to restrict prohibited content. Websites found in violation of these provisions may be heavily fined, and service providers who do not comply risk temporary suspension of operations.[118]

C3 1.00-6.00 pts0-6 pts

Are individuals penalized for online activities?	2.002 6.006

Though several digital journalists, publishers, and users were released from prison during the coverage period, many others continued to be arbitrarily detained.[119]

Journalists’ coverage of the COVID-19 pandemic also led to multiple arrests. For instance, María Luisa Arriaga and Marco Aurelio Antonima, both former employees of the private television outlet Venevision, were arrested in June 2020 and charged with incitement to hatred, under the anti-hate law, which establishes penalties of up to 20 years in prison. Both reporters were ultimately released but remain under house arrest ahead of the trial. The arrest came after they, along with two other journalists, were accused of running the Twitter account "@VV_periodistas" which published what were allegedly censorship directives ordered by Venevision’s management. The account was

suspended by Twitter in 2012, but similar anonymous accounts had since emerged.120

In April 2020, Eduardo Galindo, editor of the Senderos de Apure news site, was detained after covering the gasoline shortage. His computer and camera were also seized, while his wife and another relative were arrested at the time for refusing to hand over the devices. Galindo, who also heads the state of Apure's National Journalists' Union, was charged with the crime of disclosing false information, under Article 296 of the penal code, while his wife and nephew were charged with not complying with the authorities. All three were released within a few days under precautionary measures; Galindo must appear before a court every 8 days, while his relatives must appear every 15 days.121

The home of Darvinson Rojas was raided on March 21, 2020. Rojas was accused of incitement of hatred and public instigation for reporting on the virus and related posts on social media. Rojas's parents were also detained briefly. After twelve days of detention, Rojas was released.122

In January 2020, after more than 16 months of arbitrary detention, reporter Jesús Medina Ezaine, who has contributed to the website Dólar Today, was released, although he is similarly prevented from leaving the country and is forced to appear weekly before the authorities.123 The charges against him remained in place at the end of the coverage period. Medina had been arrested in August 2018 while accompanying an international journalist on a reporting project in Caracas.124 A Caracas court charged him with criminal association, inciting hate, and money laundering. Medina was taken before a judge in May 2019, who ruled that the reporter would go to trial deprived of liberty for the crimes of criminal association and inciting hate.125 His trial was repeatedly delayed as he remained under detention in a military prison.126

In December 2019, the prosecutor's office, despite lacking convincing evidence, extended the investigation period of journalist, human rights defender, and cyberactivist Luis Carlos Díaz by one year.127 Government officials had accused him of being involved in a plot to create a blackout in March 2019.128 After being detained the same month, he was released on condition that he reports to authorities every week, does not leave the country, and does not speak to the press about his case; his lawyers were also prohibited from speaking to the media.129 He was charged with the crime of "public incitement" which, according to Article 285 of the penal code, carries a sentence of up to six years in prison. Díaz remained under precautionary measures at the end of the coverage period. In March 2019, the Inter-American Commission on Human Rights (IACHR) had granted its own precautionary measures that compel members of the Organization of American States (OAS) to respond to urgent requests for immediate injunctive actions in serious and urgent cases, to prevent irreparable harm to Díaz and his family.130

Journalist Víctor Ugas was reportedly arrested in December 2019 by the national police's special action force (FAES) officers, along with opposition legislator Gilbert Caro, to whom Ugas is an assistant. Ugas disappeared for almost a month, and reappeared in January, though Caro's whereabouts remained unknown as of May 2020. Ugas had previously been arrested in 2014 after posting photos on Twitter of the corpse of a ruling party leader who had been assassinated.131

Also in December 2019, agents who appeared to be from the Bolivarian National Intelligence Service (SEBIN) raided

the digital news agency Venepress. A prosecutor from the public ministry had signed an order to close its offices while the outlet was under investigation. Agents removed staff from the office and reviewed documents, though no arrests were made. Venepress, though, was reportedly put under investigation for money laundering, terrorism, and association to commit a crime.[132] They were able to continue operating.

In November 2019, Ana Belén Tovar was arrested during a raid of the media company Venmedios, which shares an office and management with Entorno Inteligente, a news portal that republishes information from other sources. The prosecutor's office charged Tovar, Venmedio's operations manager, for defaming, offending, and providing false information about the minister of defense and for discrediting the military.[133] During the raid, equipment was confiscated and six journalists covering the incident for the digital media sites VPITv and Caraota Digital were also arrested, and released hours later.[134] After five months in custody, Tovar was released from detention in May 2020. Authorities prohibited photos from being taken or statements from being made as she left her place of detention, the General Directorate of Military Counterintelligence's headquarters.[135]

In July 2019, after the UN High Commissioner for Human Rights Michelle Bachelet visited and presented a critical report of Venezuela, the owner of the site Reporte Confidencial, Braulio Jatar, and 21 other prisoners were all released. Jatar had been imprisoned for nine months and then placed under house arrest in May 2017 following a 2016 arrest coinciding with a report about anti-Maduro protests. Despite his release, he is prohibited from leaving his state of Nueva Esparta and must appear in court every 15 days.[136]

The 2017 anti-hate speech law has been used against critics of government officials. In July 2019, police officers arrested journalist Wilmer Quintana, who had accused the governor of the state of Guárico and the president of the company Alimentos Guárico of corruption in the provision of public services and food. Quintana made these allegations on Facebook and Twitter. As of June 2020, Quintana remained under investigation for inciting or promoting hate, under the anti-hate law, which carries a penalty of up to 20 years in prison. Following 37 days of detention, he was moved to house arrest after suffering a heart attack while detained. He is also prohibited from speaking to the media.[137]

Users have also been detained for spreading critical content on social networks. Other users have been arrested for posting videos to social networks showing the lines at gas stations.

In June 2020, for instance, Carlos Ríos and Karelys Betsay were accused of inciting hatred, terrorism, "disqualification of police institutions," and destructively criticizing the state-created fuel supply system.[138]

In May 2020, doctor Andreína Urdaneta, who worked in a hospital in Cabimas in the state of Zulia, was arrested after publishing a meme depicting an image of Maduro with a rope around his neck as her WhatsApp status. Her arrest took place without a court order, and a criminal court charged her with incitement to hatred and offending the president.[139] After being detained for two weeks, Urdaneta was released on June 9, 2020, and is required to appear before the authorities every 30 days.[140]

Twitter user Pedro Jaimes Criollo was also released in October 2019, following a request made to the government by the UN's Working Group on Arbitrary Detention. Jaimes had been detained in May 2018 and held in solitary confinement after facing charges linked to his posts on Twitter about the presidential plane's route. He was charged in February 2019 with computer espionage and revealing a state secret. His lawyers reported that Jaimes was subjected to cruel treatment and physical torture. However, the case had yet to be dismissed as of June 2020.141

In June 2019, clarinettist Karen Palacios was arrested by military counterintelligence agents after tweeting that she had been denied a contract with the National Philharmonic Orchestra for not supporting the government. She was charged with instigating hatred. After over a month in arbitrary detention she was released with precautionary measures, prohibited from speaking to the media and using online social networks.142

After appearing in a satirical video that circulated on social media, two members of the fire department in Mérida were detained in September 2018. They were accused of inciting hate under the anti-hate speech law, which provides for penalties of up to 20 years in prison. The video mocked Maduro by showing a donkey walking through the fire station, simulating a presidential visit.143 After spending more than a month in jail, they were released but prohibited from leaving the country, publishing on social media, and making public statements. Their charges were changed to crimes of vilification and public instigation against the president, which could lead to sentences of up to six years in prison according to the penal code.144 In June 2019, they were arbitrarily dismissed from their positions by the commander of the state's fire department,145 and the charges remained in place at the end of the coverage period.

C4 1.00-4.00 pts0-4 pts

Does the government place restrictions on anonymous communication or encryption?	2.002 4.004

The constitution expressly prohibits anonymity. To buy a cell phone, a SIM card, or a USB modem to access mobile broadband, Venezuelan law requires customers to register their personal identification number, address, signature, and fingerprints.146 There are no known government restrictions on encryption technologies or other digital privacy tools.

C5 1.00-6.00 pts0-6 pts

Does state surveillance of internet activities infringe on users' right to privacy?	2.002 6.006

Although the constitution recognizes principles applicable to the protection of personal data—such as safeguard of honor, privacy, public image, confidentiality, and reputation, as well as access to information—there are no laws or telecommunications regulations dedicated to data protection. There are concerns about the government's ability to misuse personal data collected for security, welfare services, and public programs. In the absence of personal data protection legislation, the destination, storage, and ultimate purpose of the government's collection of information remains unknown.147

Government surveillance and counterintelligence activities have increased since 2013, when the government released its 2013–2019 "Plan de la Patria," which emphasized strengthening national defense among its priorities.[148] Given the lack of independent oversight, there are concerns about the ease with which systematic content filtering and surveillance could be implemented. Digital activists have also expressed alarm regarding the government's growing appetite to invest in intelligence systems and operations.[149]

A decree issued in October 2013 created the Strategic Center for the Security and Protection of the Fatherland (CESPPA), a special body charged with monitoring and tracking social media and other online information.[150] Agents of the National Guard have also reportedly been trained by the Ministry of Information and Communication in the management of social networks for the "implementation of early warnings" in order to "truthfully" inform Venezuelans, and detect threats "to defend our national sovereignty."[151]

According to an April 2020 preliminary report by VeSinFiltro, during the previous month the government had launched a phishing attack against the Héroes de la Salud platform, which had been developed by Guaidó's team to allow health workers to register for economic aid. The attack, assisted by CANTV, directed users to a look-alike website that asked registrants for personal information, including their identity card number, work and home addresses, and images of official documents.[152] In addition to jeopardizing users' privacy, the attack could place registrants in danger of layoffs or other types of retaliation, as the majority of health personnel are employed in the public sector.

Similarly, in early 2019, researchers found that a sophisticated phishing campaign targeted the VoluntariosxVenezuela platform, a site developed by the Venezuelan opposition coalition to register volunteers for the distribution of humanitarian aid. When using CANTV and Movilnet, sophisticated traffic tampering directed users to a look-alike website. Researchers found that the domain was registered with details associated with CONATEL. As a result of this campaign, researchers estimated that "tens of thousands of people submitted their data to the malicious cloned website"—a breach that has raised fears that the government, especially given its history, would use lists of opponents to subject them to political discrimination.[153]

The government also has means of collecting citizens' personal data through the implementation of public programs. First introduced in February 2017, the "Carnet de la Patria" (the Fatherland Card), is an electronic identification card used to channel social aid.[154] The Carnet collects basic data such as address and date of birth, but also other kinds of personal information such as political party membership.[155] The mobile app "VeQR-Somos Venezuela" is associated with the Carnet. To request a public benefit, citizens must scan their card's Quick Response (QR) code and activate the Global Positioning System (GPS) of their cellphone, potentially allowing the government to track not only their personal data, but their location.[156] According to Reuters, the Chinese company ZTE is working within a special unit of CANTV that manages the Carnet's database.[157]

As of 2020, the program has advanced to become a comprehensive platform called "Sistema Patria" (Fatherland System).[158] Through this system, Venezuelans can register to receive social benefits, regardless of whether they own the Carnet. The system is accessed through a website where census-type, socio-personal, and family information is

collected and stored. Once registered with their identity card, users have access to a virtual wallet where they can receive payments, such as pensions.[159] On the platform users find a set of surveys about the Local Committees for Supply and Production (CLAP) program; the surveys seek to determine the type of products consumed, among other data.[160]

This virtual wallet has also been integrated with the country's biopayment system, a biometric point of sale system that is available in banks and some stores.[161] Starting on June 1, 2020, access to subsidized gas prices required the vehicle to be registered in the Sistema Patria system.[162] In addition to registering, the biopayment system will help secure the subsidy.[163]

The Sistema Patria has also been used to respond to the COVID-19 pandemic. In April 2020, a "stay at home" bonus for self-employed and independent workers was issued to those who had registered through the system.[164] Venezuelans were also asked to respond to a survey on the virus, which had reportedly received more than 5 million responses as of mid-March.[165]

In 2019, the government began implementing Seas Patria, a national system to deliver subsidized food, in conjunction with the Carnet and Sistema Patria.[166] In the program, the national militia, part of the armed forces, is tasked with certifying each family head, in accordance with information provided by the Sistema Patria.[167] According to the NGO Transparencia Venezuela, there is concern that the program, rather than seeking to mitigate a food shortage, aims to grant more power to the military.[168]

The Venezuelan government has taken steps other steps to build upon its surveillance capacities. According to human rights organizations, arrests of trade unionists, health workers, journalists, and others for messages—including those related to the pandemic—on platforms such as WhatsApp and Twitter, indicate that the government is exercising surveillance in these spaces.[169]

In late May 2020, the Fake Antenna Detection Project reported that it had found anomalous activity in at least 33 cell antennas in Caracas. These antennas were found near the offices of critical media outlets, human rights organizations, and areas of protest, along with multiple fake antennas on the Colombia-Venezuela border. Although the antennas may suggest configuration problems, they could also indicate the use of cellular surveillance equipment posing as legitimate antennas, known as international mobile subscriber identity–catchers (IMSI–catchers) or Stingrays.[170]

According to Carlos Guerra, one of the main researchers on the Project, who uses these surveillance devices is impossible to know. Generally, Guerra claims they are used by security forces, sometimes legally in the framework of police investigations, but also secretly to surveil extralegally. Regulations for police and security forces in Venezuela to prevent them from conducting surveillance are almost null. The Project's study, which observed that the teams operating the equipment are in headquarters of security agencies, led researchers to believe that the antenna can be operated by personnel from these same agencies for intelligence purposes.[171]

In July 2018, the Ministry of Popular Power for Interior Relations, Justice and Peace launched the Quadrants of Peace

(Cuadrantes de Paz) a “mission” (program) to strengthen citizens’ security. The plan is joined to the Ven 911 system, which has video cameras in public spaces to “speed up the response capacity of the police and military agencies” to keep up with the demands of citizen security.172 Also, through an agreement with the Chinese government, a biometric system began to be implemented to strengthen the management of services in the police forces.173

According to the journalist William Peña, who has monitored the implementation of social control measures, the installation of security cameras in certain areas of Caracas continues to progress, though the cameras have not been put into operation. Although the cameras can collect the data, the government “does not have broadband resources to transport it, or data centers prepared to handle that large amount of information." According to Peña, digital social control initiatives, "are stalled by the lack of data transport, which is the bottleneck." 174 However, an April 2020 press release from CANTV indicated that fiber-optic networks were being updated to ensure the operation of Ven 911.175

Reports indicate that the Operational Strategic Command of the Bolivarian National Armed Forces (CEOFANB) has a so-called cyberdefense room that monitors campaigns to discredit the military, as well as official statements made against Venezuela and information that could lead to a national crisis. The group also reportedly perpetrates cyberattacks against Venezuelan websites and news sites (see C8) and coordinates with CANTV to block media outlets.176

C6 1.00-6.00 pts0-6 pts

Are service providers and other technology companies required to aid the government in monitoring the communications of their users?	2.002 6.006

Score Change: The score declined from 3 to 2 due to the strict data retention requirements that are in place for mobile providers, opacity around data-sharing requirements, and a report that telecommunications companies play a key role in the government’s surveillance of opponents.

Mandatory data retention requirements are in place for telephone companies, including those providing mobile telephone services. A new administrative ruling issued by CONATEL in October 2017 established that operators must provide collected information to security services upon request, without specifying the need for a judicial order. Data to be collected includes internet protocol (IP) addresses, date and time of connections, geographic locations, and details of calls and text messages sent or received. The regulation also states that to register for a mobile phone, customers must provide data such as email, fingerprints, and a digital photograph taken at the site of the transaction.177

Manuel Cristopher Figuera, the former director of SEBIN, now a refugee in the United States, revealed in April 2020 to independent news outlet *Tal Cual* that telecommunications companies in Venezuela facilitate the state’s surveillance of opponents. One operation, for example, had companies clone phone numbers, intercept emails, and take down webpages. He identified Movistar as one of the companies that has taken such actions. Moreover, the phone

numbers of soldiers who had opposed the regime in April 2019 and fled Venezuela were cloned with telecommunications companies' knowledge. The phone numbers were then used to create fake social media accounts of the soldiers, reach out to other users, and persecute or detain anyone who expressed support.178

Other measures affect companies offering online services such as banking. In August 2018, the government agency that oversees banking operations (SUDEBAN) introduced a measure to restrict access to internet banking to customers outside of Venezuela, allegedly to prevent the purchase-sale of foreign currencies using unauthorized exchange rates. To prevent restrictions on online transfers, Venezuelans who travel abroad must notify the destination and duration of their trip. Banks must report details about the operations that customers undertake from abroad.179

C7 1.00-5.00 pts0-5 pts

Are individuals subject to extralegal intimidation or physical violence by state authorities or any other actor in retribution for their online activities?	1.001 5.005

Journalists, including those who work online, face violence, intimidation, threats, and physical attacks from the state, security forces, and civilians, amidst an environment of impunity.180 A 2019 report by the Office of the UN High Commissioner for Human Rights relayed that political prisoners face torture or cruel, inhuman, or degrading treatment or punishment in order to "extract information and confessions, intimidate, and punish."181 According to IPYS Venezuela, from June to October 2019 there were 45 attacks against the media.182 Also during 2019, journalists' devices, including cameras and mobile phones, were frequently confiscated; information on the devices was deleted by state authorities.183

Journalists covering the proceedings of the National Assembly, the public body not controlled by the government, brave serious risks. The National Guard prevents journalists from entering the National Assembly when legislative debates are scheduled. Outside the Assembly, both soldiers and members of proregime paramilitary groups reportedly harass reporters, including those who work for online outlets.184

Journalists covering National Assembly activities have also been physically assaulted and had their equipment stolen. In January 2020, during the dispute over the presidency of the National Assembly, seven journalists covering the events were assaulted or robbed.185 On February 11, when Juan Guaidó returned to the country after a diplomatic tour, at least 11 members of the media, including digital reporters from outlets like Efecto Cocuyo, El Pitazo, and Punto de Corte, were physically attacked by Maduro supporters at Maiquetía airport, leading to a host of injuries.186 Nurelyin Contreras, from Punto de Corte, was hit by around 30 people, and was even bitten.187

APEX Venezuela, the foreign press association, noted that some of the attacks were carried out by airport workers, who are under the government's control, as well as other officials.188 Moreover, police officers did not intervene as the journalists were assaulted.189 Following this, press workers, union representatives, and NGOs denounced these violent acts before the Ombudsman and the prosecutor's office, and demanded that the attorney general open an investigation.190 Various organizations such as the Inter-American Press Association and the Committee for the

Protection of Journalists (CPJ) condemned the attacks.191 No investigation had been carried out as of June 2020. Foreign observers, such as journalist Anatoly Kurmanaev, understood "the level of coordination of the attacks" and the fact they had been condoned by Venezuelan top officials, as means to achieve their goal "to stop all press coverage of events not sanctioned by the Maduro government."192

Maduro's vice minister of international communications directed other attacks at journalists and organizations that denounced the confrontation at Maiquetía airport. Among other claims, Castillo said that the journalists publicly protesting near the Venezuelan attorney general's office following Guaidó's arrival (and the ensuing physical escalation between journalists and security forces at the airport) intended to create a "circus and play the victim."193

Harassment has even extended to relatives of online reporters who have been forced into exile. In December 2019, news portal Armando.info published journalist Roberto Deniz's investigation of corruption among government officials, Colombian businessmen, and deputies of the National Assembly.194 Relatives of Deniz, who is in exile in Colombia, began to be intimidated by SEBIN officials. Likewise, Deniz was subject to insults and threats through WhatsApp and social networks. The Inter-American Commission on Human Rights (IACHR) granted precautionary measures in favor of Deniz's relatives in Venezuela, concluding that they are at risk of irreparable damage to their rights.195 The homes of journalists in exile, sometimes rented out, have also been raided by military personnel.196

C8 1.00-3.00 pts0-3 pts

Are websites, governmental and private entities, service providers, or individual users subject to widespread hacking and other forms of cyberattack?	0.000 3.003

Score Change: The score declined from 1 to 0 due to strong suspicion that the state is behind technical attacks targeting online media outlets; an October 2019 report suggested that the attacks were linked to the armed forces, which are closely aligned with the government.

Technical attacks often target digital media outlets and human rights organizations, and there is strong suspicion that the state is behind them.

Digital media sites including Crónica.uno, Noticiero Digital, CNVE24, and El Pitazo have been victims of distributed denial-of-service (DDoS) attacks. According to an October 2019 report, the armed forces are likely behind the attacks, through coordination between CANTV and the Cyber Defense Room of CEOFANB. Websites belonging to news site CNVE24 received over one thousand attacks for more than 12 hours in September 2019, while El Pitazo was offline for several hours after a DDoS attack in July.197

Other media outlets have had their social media accounts hacked. In January 2020, the Instagram account of newspaper *Tal Cual* was hacked by unknown "professionals." The newspaper deactivated its account for a short period, before resuming its operation.198

Human rights organizations have also been victims of technical attacks. In June 2019, members of PROMEDEHUM, an organization that assists victims of human rights violations, experienced several hacking attempts into their social media and email accounts through requests to verify password changes. It was determined to be an orchestrated attack, though the perpetrator is unknown.[199]

The Special Law against Computer Crimes, in force since 2001, has provisions that penalize these cyberattacks, however, they have not been applied.[200]